COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WESTERN REGIONAL OFFICE
436 Dwight Street • Springfield, Massachusetts 01103 • (413) 784-1100

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

October 23, 2009

Ida McDonnell
CAP
USEPA REGION 1
1 Congress Street – Suite 1100
Boston, Massachusetts 02114-2023

Re: Solutia Inc. Air Quality Operating Permit
• ***Minor Modification (Amendment)***
Appl. #1-O-09-015; Trans. #X228552
(Ref: FINAL OPERATING PERMIT; Appl.# 1-O-95-060; Trans. # 109627)

Dear Ms. McDonnell:

In accordance with 310 CMR 7.00 - APPENDIX C(8) of the Massachusetts Air Pollution Control Regulations ("the Regulations"), the Department of Environmental Protection ("MassDEP") is forwarding to USEPA the attached modified Final Operating Permit Minor Modification (Amendment) for Solutia Inc. located at 730 Worcester Street in Springfield, Massachusetts.

This Operating Permit Minor Modification (Amendment) is being issued after discovery that the July 24, 2009 version of this document was based on an out-dated copy of the Solutia, Inc. Operating Permit, and replaces the July 24, 2009 Minor Modification in full.

Specifically, this Operating Permit Minor Modification (Amendment) is a modification of the November 6, 2008 OP Minor Mod and reflects modifications to the startup, shutdown, and malfunction procedures for the facility scrubbers and particulate control devices (MassDEP Approval #1-P-09-002 dated May 26, 2009) and the most recent Saflex process expansion (Approval #1-P-08-005 dated 4/11/2008), as well as correcting several minor typographical and factual errors carried over from the previous Final Operating Permit. This Minor Modification was last issued August 20, 2009, but was reissued as draft on September 1, 2009 to give EPA an opportunity to comment. No comments were received from EPA, and this Minor Modification is being issued FINAL on October 23, 2009.

If you have any questions concerning this ***Minor Modification (Amendment)*** to the Final Operating Permit, please contact John Kirzec at (413) 755-2225 at your earliest convenience.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Marc Simpson
Permit Chief
Western Region

JK/jk
cc: Alan Stratton, Solutia Inc., 730 Worcester Street, Springfield, Massachusetts 01151

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AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("MassDEP") pursuant to its authority under M.G.L. c. 111, §142B and §142D, 310 CMR 7.00 et seq., and in accordance with the provisions of 310 CMR 7.00: Appendix C.

ISSUED TO ["the Permittee"]:

Solutia Inc.
730 Worcester Street
Springfield, MA 01151

INFORMATION RELIED UPON:

Application No. : 1-O-95-060
Transmittal No. : 109627

FACILITY LOCATION:

Solutia Inc.
730 Worcester Street
Springfield, MA 01151

FACILITY IDENTIFYING NUMBERS:

SSEIS ID: 042/0086
FMF FAC NO.: 298974
FMF RO NO.: 305464

NATURE OF BUSINESS:

Resins, Sealants, Adhesives, Plastics, Plastic Film, & Plastic Sheet

NORTH AMERICAN INDUSTRIAL CLASSIFICATION SYSTEM (NAICS):

Primary-3081 (Secondary-2821, 2869, & 2891)

RESPONSIBLE OFFICIAL:

Name: David Lahr
Title: Plant Manager

FACILITY CONTACT PERSON:

Name: Alan D. Stratton
Title: Environmental Protection Lead
Phone: (413) 730-3551

This operating permit shall expire on January 26, 2010.
For the Department of Environmental Protection

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Michael Gorski
Regional Director
Department of Environmental Protection
Western Regional Office

10/23/2009
Date:

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SPECIAL CONDITIONS FOR OPERATING PERMIT

A legend to abbreviated terms found in the following tables is located in Section 28 of this Operating Permit.

1. PERMITTED ACTIVITIES

In accordance with the provisions of 310 CMR 7.00:Appendix C and applicable rules and regulations, the Permittee (hereinafter "Solutia") is authorized to operate air emission units as shown in Table 1 and exempt, and insignificant activities as described in 310 CMR 7.00:Appendix C(5)(h) and (i). The units described in Table 1 are subject to the terms and conditions shown in Sections 4, 5, and 6 and to other terms and conditions as specified in this permit. Emissions from the exempt activities shall be included in the total facility emissions for the emission-based portion of the fee calculation described in 310 CMR 4.00 and this permit.

DESCRIPTION OF FACILITY AND OPERATIONS

Solutia Inc. is located at 730 Worcester Street in Springfield, Massachusetts.

Solutia Inc. manufactures specialty products including glass and window products, drug development, resins, additives, carpet fiber, and chemicals.

Tables 3, 4, 5, 6, 8, and 9 of this Operating Permit contain the air quality requirements and regulations to which the Solutia Inc. facility is subject, while Table 7 contains the air quality requirements and regulations to which the Solutia Inc. facility is **not** subject

2. EMISSION UNIT IDENTIFICATION

See each individual subsection for emission unit identification.

3. IDENTIFICATION OF EXEMPT ACTIVITIES

The following are considered exempt activities in accordance with the criteria contained in 310 CMR 7.00: Appendix C(5)(h):

Table 2

Description of Current Exempt Activities	Reason
The list of current exempt activities is contained in the Operating Permit application and shall be updated by the Permittee to reflect changes at the facility over the permit term. An up-to-date copy of exempt activities list shall be kept on-site at the facility and a copy shall be submitted to the MassDEP's Regional Office. Emissions from these activities shall be reported on the annual emissions statement pursuant to 310 CMR 7.12.	310 CMR 7.00:Appendix C(5)(h)

I. Site-Wide – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
Site-Wide	Leak Detection and Repair Valves, pumps, etc.	n/a	n/a	detection & repair
	All vents to atmosphere with opacity	various	various	various or none
	All vents to atmosphere with VOC pollutant emissions	various	various	various or none
	All vents to atmosphere with any pollutant emissions	various	various	various or none

I. Site-Wide – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
Site-Wide	various	volatile organic compounds	> 10,000 ppm reading constitutes a leak for subject valves, pumps, process drains, manhole covers, agitators, and flanges. All components that meet the definition of leaking will be repaired in accordance with the Applicable Regulations and/or Approval #.	Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/1989) Leak Detection and Repair Program Approval (4/14/1987)
Site-Wide	any	opacity	≤ 20%, except 20 to ≤ 40% for ≤ 2 minutes during any one hour	310 CMR 7.06(1)(b)

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4

EU #	Monitoring/Testing Requirements
Site-Wide	Solutia shall **1)** In accordance with 310 CMR 7.18(17)(h), upon request of the MassDEP, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(17) for applicable emission units. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the MassDEP and EPA. **2)** In accordance with 310 CMR 7.13 Stack Testing, conduct stack testing, upon written request of the MassDEP, for any air contaminant for which the MassDEP has determined testing is necessary, to ascertain compliance with the MassDEP's regulations or design approval provisos. All such testing shall be conducted in accordance with 310 CMR 7.13 (1) and (2), and in accordance with the applicable procedures specified in 40 CFR 60 Appendix A or other method if approved by the MassDEP and EPA. **3)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, unless otherwise specified, for all required continuous monitoring equipment, obtain valid data for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.

Table 5

EU #	Record-keeping Requirements
Site-Wide	Solutia shall **1)** In accordance with 310 CMR 7.00 Appendix C(10)(b), maintain records of all monitoring data and supporting information on-site for a period of at least five years from the date of the monitoring sample, measurement, report or initial operating permit application. **2)** In accordance with 310 CMR 7.12, maintain the records required to determine the nature and amounts of emissions from the facility. **3)** In accordance with 310 CMR 7.12(3)(b), retain copies of Source Registration and other information supplied to the MassDEP to comply with 310 CMR 7.12 for five years from the date of submittal.

Table 6	
EU #	**Reporting Requirements**
Site-Wide	Solutia shall **1)** In accordance with 310 CMR 7.12(2), submit a Source Registration/Emission Statement form to the MassDEP on an annual basis. **2)** In accordance with 310 CMR 7.00 Appendix C(10)(c), submit to the MassDEP two compliance summaries, one by January 30 for the time period July – December of the previous calendar year, and the other by July 30 for the time period January – June of the current calendar year. **(See Provision 10 in "GENERAL CONDITIONS FOR OPERATING PERMIT")** **3)** In accordance with 310 CMR 7.00 Appendix C(5)(b)9., submit annually a certification that the facility is maintaining the required records to assure the facility is in compliance with the applicable requirements designated in this permit. **(See Provision 10 in "GENERAL CONDITIONS FOR OPERATING PERMIT")** **4)** In accordance with 310 CMR 7.00 Appendix C(10)(a), submit to the MassDEP any record relevant to this operating permit or to the emissions of any air contaminant from the facility within 30 days of the request by the MassDEP or EPA. **5)** In accordance with 310 CMR 7.00 Appendix C(10)(f), the Permittee shall report to the MassDEP's Regional Bureau of Waste Prevention all instances of deviations from permit requirements. **(See Provision 25 in "GENERAL CONDITIONS FOR OPERATING PERMIT")** **6)** In accordance with 310 CMR 7.13(1)(d), submit to the MassDEP any stack test results for any air contaminant obtained from stack testing required by the MassDEP within such time as agreed to in the approved test protocol.

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

Site-Wide Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in Site-Wide Tables 3, 4, 5, and 6:

Table 8	
EU #	**Special Terms and Conditions**
Site-Wide	Solutia has indicated that it is subject to, and complying with, the requirements of 310 CMR 7.16, U Reduction of Single Occupant Commuter Vehicle Use. Solutia Inc. shall continue to comply with 310 CMR 7.16. Solutia has indicated that it is subject to the requirements of 42 U.S.C. 7401, §112(r) Accidental Release Prevention Requirements: Risk Management under Clean Air Act 112(r)(7), and did submit to the USEPA the facility's contingency plan for responding to an accidental releases of regulated substances.

II. Powerhouse – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1 – Powerhouse

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
Powerhouse	***Power & steam production***			
150 S01	Boiler #9 – Combustion Engineering Model #27VP-12W burning natural gas or #2 oil	150 P001*	112 MMBtu/hr	none
150 S02	Boiler #10 – Babcock & Wilcox Model EM117 burning natural gas or #2 oil	150 P001*	196 MMBtu/hr	none
150 S03	Boiler #11 – Foster Wheeler Type S Spreader Stoker burning coal	150 P001*	249 MMBtu/hr	overfire air (Foster Wheeler) & baghouse (Carborundum Environmental Systems)

***** The three emission units share a common steel stack with the following stack parameters:
Height=196 feet
Inside diameter=84 inches (7.0 feet)

II. Powerhouse – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3 – Powerhouse

EU #	Fuel or Raw Material	Pollutant	Emission Limits	Restrictions (rolling 12 month total)	Applicable Regulation and/or Approval No.
150 S01	natural gas or #2 oil	sulfur dioxide	1.2 lb SO_2/MMBtu (calendar year avg.)		310 CMR 7.22 (Acid Rain)
		particulate matter[1]	0.12 lb/MMBtu		310 CMR 7.02(8)(d) TABLE 4
		nitrogen oxides	0.30 lb/MMBtu	147 tons/year	MassDEP Approval #1-E-94-106 (10/28/1996) & 310 CMR 7.19(4)(a)4.a. Large Boiler [3]
		carbon monoxide	≤ 200 ppmvd @3% O_2		
		sulfur in fuel	0.17 lb S/MMBtu (≈ 0.3% sulfur by wt.)		310 CMR 7.05(1)(a)2.
150 S02	natural gas or #2 oil	sulfur dioxide	1.2 lb SO_2/MMBtu (calendar year avg.)		310 CMR 7.22 (Acid Rain)
		particulate matter	0.10 lb/MMBtu		MassDEP Approval #PV-76-C-001 (8/6/1976)
		nitrogen oxides	0.40 lb/MMBtu	343 tons/year	MassDEP Approval #1-E-94-106 (10/28/1996) & 310 CMR 7.19(4)(a)4.a. Large Boiler [4]
		carbon monoxide	≤ 200 ppmvd @3% O_2		
		sulfur in fuel	0.17 lb S/MMBtu (≈ 0.3% sulfur by wt.)		310 CMR 7.05(1)(a)2.
150 S03	coal	sulfur dioxide	1.2 lb SO_2/MMBtu (calendar year avg.)		310 CMR 7.22 (Acid Rain)
		particulate matter	0.027 lb/MMBtu		MassDEP Approval #PV-83-C-010 (7/27/1984) MassDEP Approval #1-P-09-002 (05/26/2009)
		nitrogen oxides	0.525 lb/MMBtu	573 tons/year	MassDEP Approval #1-E-94-106 (10/28/1996) & 310 CMR 7.19(12) Misc. RACT
		carbon monoxide	≤ 200 ppmvd @3% O_2		
		sulfur in fuel	0.55 lb S/MMBtu (rolling 30 day average)		MassDEP Approval #PV-83-C-010 (7/27/1984)
		ash in fuel	≤ 9.0% (calendar year average)		310 CMR 7.05(3) MassDEP Approval #PV-83-C-010 (7/27/1984) MassDEP Approval #1-O-05-044 (10/21/2005)
150 S01 150 S02 150 S03	any	smoke	No. 1 of the Chart no more than 6 minutes during any one hour, at no time to exceed No. 2 of the Chart		310 CMR 7.06(1)(a)

(1) Particulate matter as measured according to the applicable procedures specified in 40 CFR Part 60 Appendix A, Method 5.
(2) The lb/hr, ppmv, and lb/MMBtu emission rates are based on a 1-hour block average.
(3) Large Boilers with heat release rate ≤ 70,000 Btu/hour-ft^3
(4) Large Boilers with heat release rate >70,000 Btu/hour-ft^3

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4 – Powerhouse

EU #	Monitoring/Testing Requirements
150 S01 150 S02	Solutia shall **1)** In accordance with Regulation 310 CMR 7.04(2)(a), prior to burning oil, equip the boiler stacks with smoke density indicators. **2)** In accordance with 310 CMR 7.00 Appendix C(9)(b), monitor sulfur content of each new shipment of oil received. Compliance with % sulfur-in-fuel requirements can be demonstrated through testing (testing certification) or by maintaining a shipping receipt from the fuel supplier (shipping receipt certification). The testing certification or shipping receipt certification of % sulfur-in-fuel shall document that sulfur testing has been done in accordance with the applicable ASTM test methods D129-95, D1266-91, D1552-95, D2622-92, and D4294-90), or any other method approved by the MassDEP and EPA.
150 S01 150 S02 150 S03	Solutia shall **3)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), comply with the NOx emission stack testing requirements contained within all applicable sections of 310 CMR 7.19(13), including 310 CMR 7.19(13)(c) "Stack Testing". **4)** In accordance with 310 CMR 7.04(4)(a), inspect and maintain each boiler in accordance with the manufacturer's recommendations and test each boiler in accordance with the manufacturer's recommendations for efficient operation (consistent with the concurrent requirements to comply with the NOx RACT emission limits) at least once each calendar year.
150 S03	Solutia shall **5)** In accordance with MassDEP Approval #1-X-04-046 (December 23, 2004), ensure that the annual compliance for NO_x and CO is finished before the end of each calendar year. **6)** In accordance with MassDEP Approval #PV-83-C-010 (7/27/1984), ensure that proximate analysis is performed for all coal shipments off-loaded at the facility. **7)** In accordance with MassDEP Approval #PV-83-C-010 (7/27/1984), calibrate, operate, and maintain an opacity monitor meeting Performance Specification 1 of 40 CFR 60; Appendix B. **8)** In accordance with MassDEP Approval #PV-83-C-010 (7/27/1984), operate and maintain an alarm system on baghouse to notify operator if bag failure occurs. **9)** In accordance with 310 CMR 7.00 Appendix C(9)(b), monitor sulfur and ash content of each new shipment of coal received. Compliance with % sulfur-in-fuel and % ash-in-fuel requirements can be demonstrated through testing (testing certification) or by maintaining a shipping receipt from the fuel supplier (shipping receipt certification). The testing certification or shipping receipt certification of % sulfur-in-fuel and % ash-in-fuel shall document that sulfur and ash testing has been done in accordance with the applicable ASTM test methods (D129-95, D1266-91, D1552-95, D2622-92, and D4294-90 for sulfur; D482-95 for ash), or any other method approved by the MassDEP and EPA.
Site-Wide	**See Site-Wide Testing / Monitoring Requirements**

Table 5 – Powerhouse	
EU #	**Record-keeping Requirements**
150 S01 150 S02 150 S03	Solutia shall **1)** In accordance with 310 CMR 7.04(4)(a), maintain records of the results of the inspection, maintenance, and annual testing required by this Regulation and shall post these results conspicuously on or near the boiler. **2)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), comply with the NOx emission recordkeeping and reporting requirements contained within all applicable sections of 310 CMR 7.19(13), including 310 CMR 7.19(13)(d) "Recordkeeping and Reporting". **3)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), perform the same NOx emission recordkeeping and reporting for EU 150 S03 as is required for EU 150 S01 and 150 S02, as specified in the applicable "Regulations". **4)** In accordance with Regulation 310 CMR 7.04(2)(a) and 310 CMR 7.00 Appendix C(9)(b)2., maintain continuous records of smoke density from smoke density indicators (if burning oil in EUs 150 S02 or 150 S03) or opacity from the opacity monitor on EU 150 S03.
150 S03	Solutia shall **5)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., demonstrate compliance for each new shipment of coal received with the % sulfur-in-fuel and % ash-in-fuel requirements specified in 310 CMR 7.05(1)(a)1. and 310 CMR 7.05(3)(c) respectively, by testing certification or shipping receipt certification, either of which must certify the % sulfur-in-fuel and % ash-in-fuel content of the shipment.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – Powerhouse	
EU #	**Reporting Requirements**
150 S01 150 S02 150 S03	Solutia shall **1)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), comply with the NOx emission reporting requirements contained within all applicable sections of 310 CMR 7.19(13), including 310 CMR 7.19(13)(d) "Recordkeeping and Reporting". **2)** In accordance with 310 CMR 7.19(13)(d)9, submit compliance records within 10 days of written request by the MassDEP or USEPA. **3)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), perform the same NOx emission reporting for EU 150 S03 as is required for EU 150 S01 and 150 S02, as specified in the applicable "Regulations". **4)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), a) submit a pretest protocol for the required emission test (NOx and CO) for review and written MassDEP approval at least 60 days prior to the anticipated date of testing. Include in the pretest protocol a description of sampling point locations, sampling equipment, sampling analytical procedures, and the operating conditions for the required testing, and b) submit the emission test report for the review and written MassDEP approval within 60 days of the completion of the compliance stack testing.
150 S03	Solutia shall **5)** In accordance with MassDEP Approval #PV-83-C-010 (7/27/1984), submit quarterly reports of coal shipment sizes and coal analysis.
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

Powerhouse Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in Powerhouse Table 3, 4, 5, and 6:

Table 8 – Powerhouse

EU #	Special Terms and Conditions
150 S03	Solutia shall **1)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996) and a MassDEP letter to Solutia dated January 3, 2002, ensure that the #11 boiler operates with its controls set in accordance with the following requirements, except as allowed in Special Provision 2.: a. Oxygen Controller Bias: Automatic b. Underfire Air Fan Bias: -2 c. Overfire Air Fan Bias: 15
150 S03	Solutia shall **2)** In accordance with MassDEP Approval #1-E-94-106 (October 28, 1996), operate with boiler controls set different than specified in Special Provision 1 (above) but only after receiving written approval from the MassDEP. A request for such operation shall be made in writing to the MassDEP and shall include a demonstration that NOx and CO will not exceed emission limits established in this approval while operating with the modified control settings. This demonstration need not entail testing as elaborate as a formal compliance test (submittal and written approval of stack test protocol, notifying the MassDEP of the test dates, MassDEP witnessing of the test, submittal of stack test report, MassDEP review of stack test report and the issuance of correspondence documenting the stack test results) but must follow the applicable procedures established in Appendix A of 40 CFR Part 60. Solutia may operate with modified boiler control settings for the purpose of making this demonstration, but only for a maximum of 8 hours on any one day and only long enough to document NOx and CO emissions in support of a request for modified operation. Once modified boiler control setting are approved by the MassDEP, Solutia shall conduct the next yearly compliance stack test utilizing these modified control settings. **3)** In accordance with MassDEP Approval #PV-83-C-010 (7/27/1984), Solutia shall ensure that fabric filter SOP/SMP procedures are kept at or near the unit. All persons operating or responsible for the operation of the baghouse will sign a statement affirming that they have read and understand the SOP and SMP. **4)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.
Site-Wide	**See Site-Wide Reporting Requirements**

III. South Butvar – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1a – South Butvar

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
South Butvar	***Manufacturing of polyvinyl butyral resin***			
142 S01	Vinyl Acetate Distillation & Storage			
	Refined Vinyl Acetate Storage Tank	142 P636	5,000 gallons	chilled condenser
142 S02	Polymerization of Vinyl Acetate			
	Polymerization Reactor #1	142 P662	— gallons	water cooled condenser & wet scrubber
	Polymerization Reactor #2	142 P663	— gallons	
142 S03	Dissolving & Storage of Polyvinyl Acetate			
	Butvar Gelva Storage Tank #1	142 P630	— gallons	water cooled condenser & wet scrubber
	Butvar Gelva Storage Tank #2	142 P630	— gallons	
	Butvar Gelva pre-dissolver	142 P629	— gallons	none
142 S04	React Polyvinyl Acetate to Polyvinyl Butyral			
	Hydrolysis Reactor #1	142 P656	— gallons	chilled condenser
	Hydrolysis Reactor #2	142 P657	— gallons	chilled condenser
	Hydrolysis Reactor #3	142 P658	— gallons	chilled condenser
	Hydrolysis Reactor #4	142 P813	— gallons	chilled condenser
	PVA Slurry Tank #1	142 P625	— gallons	chilled condenser
	PVA Slurry Tank #2	142 P654	— gallons	chilled condenser
	PVA Slurry Tank #3	142 P655	— gallons	chilled condenser
	Butyraldehyde Head Tank	142 P649	— gallons	chilled condenser
	Acetal Reactor #1	142 P652	— gallons	chilled condenser
	Acetal Reactor #2	142 P653	— gallons	chilled condenser
	Acetal Reactor #3	142 P814	— gallons	chilled condenser
	Acetal Varnish Storage Tank #1	142 P626	— gallons	chilled condenser
	Acetal Varnish Storage Tank #2	142 P627	— gallons	chilled condenser
142 S05	Resin Washing & Stabilization			
	Wash Tank #1	142 P650	— gallons	none
	Wash Tank #2	142 P651	— gallons	none
	Stabilization Tank #1	142 P646	— gallons	none
	Stabilization Tank #2	142 P647	— gallons	none
	Stabilization Tank #3	142 P648	— gallons	none
	Stabilization Tank #4	142 P815	— gallons	none
	CC-Tank	142 P634	— gallons	none
	Recycle Tank	142 P628	— gallons	none
142 S06	Resin Drying			
	Tube Drier	140 P619	—	baghouse, packed bed scrubber, & biofilter

III. South Butvar – Emission Unit Identification (continued)

Table 1b – South Butvar

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
South Butvar	***Manufacturing of polyvinyl butyral resin***			
142 S07	Resin Transfer, Storage & Blending			
	Off-Grade Hopper	114 P398	—	cyclone/baghouse
	Blender	114 P399	—	cyclone/baghouse
	Blender Transfer	114 P400		cyclone/baghouse
	Resin conveying	140 P620		cyclone/baghouse
	Resin conveying	140 P623		cyclone/baghouse
	Resin conveying	140 P816		cyclone/baghouse
	Resin conveying	140 P817		cyclone/baghouse
	Resin conveying	114 P396		cyclone/baghouse
142 S08	Recovery Area Storage			
	A-Crude Storage Tank #1	TP7 T602	10,000 gallons	chilled condenser
	A-Crude Storage Tank #2	TP7 T625	30,000 gallons	chilled condenser
	A-Crude Storage Tank #3	TP7 T626	30,000 gallons	chilled condenser
	B-Crude Storage Tank #1	TP7 T603	50,000 gallons	chilled condenser
	B-Crude Storage Tank #2	TP7 T604	50,000 gallons	chilled condenser
	A-Alcohol Storage Tank	TP7 T605	30,000 gallons	chilled condenser
	B-Alcohol Storage Tank #1	TP7 T608	30,000 gallons	chilled condenser
	B-Alcohol Storage Tank #2	TP7 T609	30,000 gallons	chilled condenser
	B-Heads Storage Tank	TP7 T614	10,000 gallons	chilled condenser
	Bulk Ethyl Acetate Storage Tank	TP6 T600	150,000 gallons	chilled condenser
	Ethyl Acetate Day Tank	TP7 T610	10,000 gallons	chilled condenser
	Ethyl Acetate Off-Grade Storage Tank	TP7 T627	30,000 gallons	chilled condenser
	Butyraldehyde Storage Tank	TP7 T607	35,000 gallons	chilled condenser
	Ethanol (SD-29) Storage Tank	TP7 T601	75,000 gallons	chilled condenser
142 S09	Tank Pit 5 Ethyl Acetate Storage			
	TP5 (west) Ethyl Acetate Storage Tank	TP5 T616	100,000 gallons	chilled condenser
142 S10	Distillation Column for Recovery of Reactant			
	B-Column	142 P640	—	chilled condenser
142 S11	Distillation Column			
	D-Column	142 P638	—	packed bed scrubber & biofilter
142 S12	Distillation Columns: Solvent/Byproduct Recovery			
	PE-Column	142 P214	—	none
	C-Column	142 P639	—	none
	A-Column	142 P641	—	none
142 S13	Ethyl Acetate Loading			
	Ethyl Acetate Loading – Dock 7	TP7 P622		none
	Ethyl Acetate Loading – Dock 9	TP7 P624		
142 S14	Filtration of Polyvinyl Butyral Solution			
	Three (3) Plate & Frame Filter Presses	142 P826		none

III. South Butvar – Emission Unit Identification (continued)

Table 1c – South Butvar

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
142 S15	Raw Material Storage Tank Storage Tank – Inhibited Vinyl Acetate	TP5 T051	200,000 gallons	packed bed scrubber & chilled condenser
142 S16	HAP Batch Process Vents			
	Polymerization Reactor #1	142 P662		water cooled condenser & wet scrubber
	Polymerization Reactor #2	142 P663		
	Butvar Gelva Storage Tank #1	142 P630		
	Butvar Gelva Storage Tank #2	142 P631		
	Two (2) PK Collector Tanks	142 P644		
	Bead slurry Storage #1	142 P632		None; emissions vented back to polymerization reactors
	Bead slurry Storage #2	142 P633		

III. South Butvar – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3a – South Butvar

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
142S01	monomer	volatile organic compounds	coolant supply temp. ≤ 29°F	MassDEP Approval #1-P-07-023 (08/28/2007)
142S02	monomer	volatile organic compounds	cooling water supply temperature < 95°F scrubber flow rate ≥ 5.0 gallons/minute	MassDEP RACT Approval (6/20/1989); 310 CMR 7.18(17) 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.) MassDEP Approval #1-P-07-023 (08/28/2007) MassDEP Approval #1-P-09-002 (05/26/2009)
142S03	polymer, solvent	volatile organic compounds	cooling water supply temperature < 95°F scrubber flow rate ≥ 2.0 gallons/minute	MassDEP RACT Approval (6/20/1989); 310 CMR 7.18(17) 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.) MassDEP Approval #1-P-07-023 (08/28/2007) MassDEP Approval #1-P-09-002 (05/26/2009)
142S04	polymer, solvent, reactant	volatile organic compounds	coolant supply temp. ≤ 29°F	MassDEP Approval #1-P-07-023 (08/28/2007)
142S05	polymer, water	volatile organic compounds	none	MassDEP RACT Approval (6/20/1989); 310 CMR 7.18(17)
142S06	polymer	volatile organic compounds, particulate matter	≥ 95% scrubber efficiency (alone) for ethanol ≥ 70% scrubber efficiency (alone) for ethyl acetate & butyraldehyde ≥ 85% reduction by scrubber & biofilter	MassDEP RACT Approval (6/20/1989); 310 CMR 7.18(17) MassDEP Approval #PV-85-IF-012 (10/29/1985; amended 8/25/1987) MassDEP Approval #1-P-92-006 (5/26/1992) MassDEP Approval #1-P-01-068 (12/19/2001) MassDEP Approval #1-P-03-008 (3/25/2003) MassDEP Approval #1-P-09-002 (05/26/2009)

Table 3b – South Butvar

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
142S07	polymer	particulate patter	no visible emissions	MassDEP Approvals #PV-75-IF-012 (2/5/1976), #PV-76-IF-005 (11/1/1976), #PV-79-IF-005 (4/20/1979), and #PV-79-IF-015 (10/5/1979) MassDEP Approval #1-P-09-002 (05/26/2009)
142S08	solvents	volatile organic compounds	coolant supply temp. ≤ 29°F	MassDEP Approval #1-P-07-023 (08/28/2007)
142 S09	off-grade ethyl acetate	volatile organic compounds	coolant supply temp. ≤ 29°F	MassDEP Approval #1-P-07-023 (08/28/2007)
142S10	reactant	volatile organic compounds	coolant supply temp. ≤ 29°F	MassDEP Approval #1-P-07-023 (08/28/2007)
142S11	solvent	volatile organic compounds	≥ 95% scrubber efficiency (alone) for ethanol ≥ 70% scrubber efficiency (alone) for ethyl acetate & butyraldehyde ≥ 85% reduction by scrubber & biofilter	MassDEP Approval PV-85-IF-012 (10/29/1985; amended 8/25/1987) MassDEP Approval #1-P-92-006 (5/26/1992) Transmittal #46119 (12/18/1992; amended 10/8/1993) MassDEP Approval #1-P-03-008 (3/25/2003) MassDEP Approval #1-P-09-002 (05/26/2009)
142S12	solvent	volatile organic compounds	none	MassDEP RACT Approval (6/20/1989)
142S13	solvent	volatile organic compounds	none	MassDEP RACT Approval (6/20/1989)
142S14	solvent	volatile organic compounds	none	MassDEP RACT Approval (6/20/1989)
142 S15	solvent	volatile organic compounds	coolant supply temp. ≤ 29°F	MassDEP Approval #1-P-07-023 (08/28/2007) MassDEP Approval #1-P-09-002 (05/26/2009)
142 S16	solvents	hazardous air pollutants	reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by ≥ 98% by weight	40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.) MassDEP Approval #1-P-07-023 (08/28/2007)

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4a – South Butvar

EU #	Monitoring/Testing Requirements
142S01 142S04 142S08 142S09 142S10 142S15	Solutia shall **1)** In accordance with MassDEP Approval Trans. #46118 (1/15/1993), operate and maintain an alarm system that will give an audible and visual indication to the control room operator whenever the circulating coolant temperature measured at the chiller inlet is > 40°F. The control room operator will take immediate corrective action if the circulating coolant temperature taken at the chiller inlet is > 40°F. **2)** In accordance with MassDEP Approval Trans. #46118 (1/15/1993; amended 2/19/1993), operate and maintain a no-flow alarm system for the circulating coolant supply flow. The alarm must give an audible and visual indication to the control room operator of a no-flow condition. **3)** In accordance with MassDEP Approval Trans. #46118 (1/15/1993), install flow monitoring devices on each condenser to allow for measurement of circulating coolant flow through each condenser. **4)** In accordance with MassDEP Approval Trans. #46118 (1/15/1993) and 310 CMR 7.00 Appendix C (9)(b)(2), monitor the circulating coolant flow through each condenser at least once per calendar month, and adjust the flow as needed to achieve the flows documented in MassDEP Approvals #PV-86-IF-004 (4/29/1986) and #PV-87-IF-023 (3/22/1988). **5)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, operate the circulating coolant temperature alarm system at all times the South Butvar process is operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s). Solutia shall ensure that the alarm system is operational for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
142S02	Solutia shall **6)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), monitor and record the water flow to the scrubber to ensure it is ≥ 5.0 gpm during operations of the polymerization reactors. **7)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), ensure that the low/no water flow alarm for the scrubbers will trigger at no less than 80% of the minimum scrubber water flow rate (Minimum set point of alarm is 4.0 gpm). **8)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), ensure that the scrubber water low/no flow alarms are operating at all times the scrubbers are operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunctions (s). **9)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), obtain valid data from the low/no flow alarm monitors for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance. **10)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), test scrubber water flow alarms for proper operation at least once per calendar month.

Table 4b – South Butvar

EU #	Monitoring/Testing Requirements
142S02 142S03	Solutia shall **11)** In accordance with the 310 CMR 7.18(17) and the DEP RACT Approval (6/20/1989), continuously monitor and record the cooling water supply temperature. **12)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, operate the cooling water supply temperature monitor at all times during process operation, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s). Solutia shall obtain valid data from this monitor for at least 75% of the process operating hours per calendar day, 75% of the operating hours per calendar month, and 90% of the operating hours per calendar quarter, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
142S06 142S11	Solutia shall, if operating under MassDEP RACT Approval (6/20/1989), MassDEP Approval # PV-85-IF-012 (10/29/1985; amended 8/25/1987), and 310 CMR 7.18(17), **13)** Continuously monitor and record the scrubber water flow. **14)** Operate and maintain an alarm system that will give an audible and visual indication to the control room operator whenever the scrubber water flow ≤ 180 gpm. **15)** Test the scrubber water flow alarm for proper operation at least once per calendar month. **16)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, operate the scrubber water flow monitor at all times the scrubber is operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s). Solutia shall obtain valid data from this monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
142S06 142S11	Solutia shall, if operating under MassDEP Approval #1-P-92-006 (5/26/1992), **17)** Monitor the inlet flow to each cell of the biofilter at least once per calendar month to ensure the flow is ≤ 8670 acfm. **18)** Monitor at least once per calendar month the pressure drop across each biofilter cell. **19)** Monitor, at least once per calendar year, the active depth of compost in any cell of the biofilter, as indicated by the permanent rulers on the biofilter walls to ensure depth does not decrease to less than 2 feet 11 inches, unless the MassDEP approves of a change in writing. **20)** Conduct performance tests, as detailed below, whenever the biomedia in any cell is completely replaced. a. Smoke test the biofilter air distribution system prior to placement of compost material and provide advance notice of this test to the MassDEP. b. Perform two sets of tests to determine the flow distribution and VOC destruction efficiency; the first within 10 days after startup and the second within 10 days after the end of the debugging / acclimation period. Testing shall minimally entail sampling for flow and VOC concentration at no fewer than three points at the outlet of each cell, with concurrent sampling for flow and VOC concentration at the scrubber inlet and biofilter inlet. c. Submit the original field data sheets from the test no later than one business day following data generation, and submit summarized results for MassDEP review no later than 21 days thereafter. **21)** In accordance with MassDEP Approval #1-P-03-008 (3/25/2003), ensure that annual testing (at least once per calendar year) of VOC destruction efficiency of the biofilter is conducted, unless another time period is granted by the MassDEP in writing. The testing shall utilize EPA Method 25A and be conducted as described in Appendix C of the SOP/SMP Manual. At least 15 sample points on the biofilter surface should be monitored during each testing event.

Table 4c – South Butvar	
EU #	**Monitoring/Testing Requirements**
142S06 142S11	Solutia shall, if operating under MassDEP Approval #1-P-92-006 (5/26/1992), **22)** In accordance with MassDEP Approval #1-P-03-008 (3/25/2003), ensure that annual testing (at least once per calendar year) of the biofilter compost for moisture content is performed. Samples from at least three points on the biofilter should be analyzed utilizing Method 2540G from Standard Methods for Examination of Water and Wastewater, APHA-AWWA-WPCF, 17th Edition, 1989 (or equivalent). **23)** In accordance with MassDEP Approval #1-P-03-008 (3/25/2003), ensure that annual testing (at least once per calendar year) of the biofilter compost for pH is performed. Samples from at least three points on the biofilter should be analyzed utilizing Method 9045 from Test Methods for Evaluating Solid Waste: Physical / Chemical Methods, EPA SW-846, 1986 (or equivalent). **24)** In accordance with MassDEP Approval #1-P-03-008 (3/25/2003), ensure that annual testing (at least once per calendar year) of the biofilter compost for organic content is performed. Samples from at least three points on the biofilter should be analyzed utilizing Method 2540G from Standard Methods for Examination of Water and Wastewater, APHA-AWWA-WPCF, 17th Edition, 1989 (or equivalent).
142S03	Solutia shall **25)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), monitor and record the water flow to the scrubber to ensure it is ≥ 2.0 gpm. **26)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), ensure that the low/no water flow alarm for the scrubbers will trigger at no less than 80% of the minimum scrubber water flow rate (Minimum set point of alarm is 1.6 gpm). **27)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), ensure that the scrubber water low/no flow alarms are operating at all times the scrubbers are operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunctions (s). **28)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), obtain valid data from the low/no flow alarm monitors for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance. **29)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), test scrubber water flow alarms for proper operation at least once per calendar month.

Table 4d – South Butvar

EU #	Monitoring/Testing Requirements
142 S15	Solutia shall **30)** In accordance with MassDEP Approval Trans. #50851 (10/30/1992) and 310 CMR 7.00 Appendix C(9)(b)2, monitor and record the water flow to the scrubber to ensure it is ≥ 5.0 gpm (or the optimized water flow rate yielding ≥ 90% scrubbing efficiency) during loading operations. **31)** In accordance with MassDEP Approval Trans. #50851 (10/30/1992), ensure that the water flow alarm for the scrubber is set to activate when water flow is < ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 90% removal efficiency). **32)** In accordance with MassDEP Source 51 Approval (4/15/1976) and 310 CMR 7.00 Appendix C(b)(2), monitor and record the circulating coolant supply temperature at least once per calendar month. **33)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, operate the water flow monitor at all times during loadings operation, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s). Solutia shall obtain valid data from the water flow monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
HAP emissions in Batch Process Vent group	Solutia shall **34)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF, ensure that the scrubber water flows for Polymerization Reactors No. 1 & No. 2 (EU 142 S02; stacks 142P662 & 142P664) are monitored continuously and the flows are set at a minimum of 5 gallons per minute each. **35)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF, ensure that the scrubber water flow for the shared scrubber serving Butvar Gelva Storage Tank No. 1 & No. 2 (EU 142 S03; existing stacks 142P630 & 142P631) is monitored continuously and the flow is set at a minimum of 2 gallons per minute. **36)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF, operate and maintain a low/no flow alarm system for the Polymerization Reactor No. 1 & No. 2 scrubbers and the shared scrubber serving Butvar Gelva Storage Tanks No. 1 & No. 2 that will trigger at no less than 80% of the minimum scrubber water flow rate. **37)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF, test these scrubber water flow alarms for proper operation at least once per calendar month. **38)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF, ensure the scrubber water low/no flow alarms are operating at all times the scrubbers are operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s).

Table 4e – South Butvar	
EU #	**Monitoring/Testing Requirements**
all applicable components in VOC service	Solutia shall **39)** In accordance with MassDEP RACT Leak Detection and Repair Program Approval (4/14/1987), MassDEP RACT Approval (6/20/1989), and 310 CMR 7.00 Appendix C(9)(b)2., implement leak detection and repair procedures according to the "Standards of Performance for New Stationary Sources; Synthetic Organic Chemical Manufacturing Industry; Equipment Leaks of VOC" dated October 13, 1983 for all applicable components in VOC service. In cases where the specific equipment components with the potential to leak VOC from this process are not addressed in this document, the CTG document "Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment" dated March 1984 and past MassDEP policy will serve to determine what procedures will be implemented, except that the more frequent leak checking intervals and quicker repair turnarounds specified in the former document will apply.
all applicable components in HAP service	Solutia shall **40)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63, subpart UU, monitor for leaks for all applicable equipment that contains or contacts 5 weight percent HAP or greater and operates 300 hours per year or more.
Site-Wide	**See Site-Wide Testing / Monitoring Requirements**

Table 5a – South Butvar	
EU #	**Record-keeping Requirements**
142S01 142S04 142S08 142S09 142S10 142S15	Solutia shall: **1)** In accordance with MassDEP Approval Trans. # 46118 (1/15/1993), maintain monthly logs of the circulating coolant flows. **2)** In accordance with MassDEP Approval Trans. # 46118 (1/15/1993), maintain logs of hours when the alarm system was not operational while the process was operating. **3)** In accordance with MassDEP Approval Trans. # 46118 (1/15/1993; amended 2/19/1993), maintain a log of all alarms, the date, time, and cause of the alarm, corrective measures taken, and when the chiller was operating normally again.
142S02	Solutia shall: **4)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), maintain records of scrubber water flow, scrubber water low/no flow alarms, and water flow monitoring downtime.
142S06 142S11	Solutia shall, <u>if operating under MassDEP RACT Approval (6/20/1989), MassDEP Approval #PV-85-IF-012 (10/29/1985; amended 8/25/1987), and 310 CMR 7.18(17),</u> **5)** maintain a log for each scrubber alarm, the date, time, and cause of the alarm, corrective measures taken, and when the scrubber was operating normally again. Additionally Solutia shall submit to the MassDEP documentation of the amounts of VOCs emitted while uncontrolled and preventive maintenance schedule to avoid similar failures thereafter. **6)** maintain logs of scrubber water flows. Solutia shall, <u>if operating under MassDEP Approval #1-P-92-006 (5/26/1992),</u> **7)** In accordance with MassDEP Approval #1-P-03-008 (3/25/2003), maintain records of the following: a. all test data and all results of tests performed on the biofilter, b. all monitoring performed, including flows, pressure drops, and compost bed depth. c. all calibrations performed on flow and pressure drop instrumentation.
142S02 142S03	Solutia shall **8)** In accordance with the MassDEP RACT Approval (6/20/1989), continuously record the cooling tower water supply temperature. **9)** In accordance with the MassDEP RACT Approval (6/20/1989) and 310 CMR 7.00 Appendix C(10)(b), maintain records of cooling tower water supply temperature monitor downtime. **10)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63 Subpart FFFF (Misc. Organic Chemical Mfg.), maintain records of scrubber water flow, scrubber water low/no flow alarms, and water flow monitoring downtime.

Table 5b – South Butvar	
EU #	**Record-keeping Requirements**
142S15	Solutia shall **11)** In accordance with MassDEP Approval Trans. #50851 (10/30/1992) and 310 CMR 7.00 Appendix C(10)(b), maintain records of scrubber water flow, scrubber water low-flow alarms, circulating coolant temperature, and water flow monitor downtime.
HAP emissions in batch process vent group	Solutia shall **12)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007; amended 11/20/2007) obtain valid data from the low/no flow alarm monitors for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 95% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance. **13)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63, Subpart FFFF, maintain records as specified in 40 CFR 63.2525. **14)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63, Subpart FFFF, maintain a Start-up, Shut-down and Malfunction plan in accordance to 40 CFR 63.6(e)(3) and maintain associated records. **15)** In accordance with MassDEP Approval #1-P-07-023 (08/28/2007) and 40 CFR 63, Subpart FFFF, maintain records as specified in 40 CFR 63.10(b).
all applicable components in VOC service	Solutia shall **16)** In accordance with MassDEP RACT Leak Detection and Repair Program Approval (4/14/1987), MassDEP RACT Approval (6/20/1989), and 310 CMR 7.00 Appendix C(9)(b)2., submit a report each calendar quarter (Jan.-March, April-June, July-Sept., and Oct.-Dec.) by the end of the month following the end of the calendar quarter summarizing the leak detection and repair results.
all applicable components in HAP service	Solutia shall **17)** In accordance with the requirements of 40 CFR 63.1038 for applicable equipment, maintain leak detection records for applicable equipment.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – South Butvar

EU #	Reporting Requirements
142S01 142S04 142S08 142S09 142S10 142S15	Solutia shall **1)** In accordance with 310 CMR 7.00 Appendix C(10)(d)3., prepare and submit reports for each calendar quarter (Jan.-March; April-June; July-Aug.; Sept.-Dec.) within 15 days after the end of the quarter, documenting chiller operation and flows, any alarm event(s), reasons for the alarm(s), and corrective action taken in response to the alarm(s).
HAP emissions in Batch Process Vent group	Solutia shall **2)** In accordance with 40 CFR 63, Subpart FFFF, submit to MassDEP the Pre-compliance Report by November 10, 2007 containing the information specified in 40 CFR 63.2520(c). **3)** In accordance with 40 CFR 63, Subpart FFFF, submit to MassDEP the Notification of Compliance Status Report by October 7, 2008 containing the information specified in 40 CFR 63.2520(d). **4)** In accordance with 40 CFR 63, Subpart FFFF, submit to MassDEP the Compliance Reports semi-annually for the reporting periods of Jan 1 – June 30 and July 1 – Dec 31 each year. The first report must cover the period of May 10, 2008 – Dec 31, 2008. Reports are due by February 28 and August 31 following each semi-annual period. Compliance Reports must contain the information specified in 40 CFR 63.2520(e). **5)** In accordance with 40 CFR 63, Subpart FFFF, submit to MassDEP the Notification of Process Changes when changes are made which are outside the scope of the existing operating scenario. Reports must be submitted on the timeframe provided in 40 CFR 63.2520(e)(10), and must contain the information specified in this section. **6)** In accordance with 40 CFR 63, Subpart FFFF, submit to MassDEP the Report of applicable deviations from the Start-up, Shut-down and Malfunction plan in accordance to 40 CFR 63.6(e)(3).
All applicable components in HAP service	Solutia shall **7)** In accordance with 40 CFR 63, Subpart UU, submit to MassDEP An Initial Compliance Status Report by Feb 28, 2009 that includes the reporting period of May 10, 2008 - Dec 31, 2008. Follow-up Periodic Reports are due semi-annually for the reporting periods of Jan 1 – June 30 and July 1 – Dec 31 each year. Reports are due by Feb 28 and August 31 following each semi-annual period. Compliance Reports must contain the information specified in 40 CFR 63.1039.
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

South Butvar Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in South Butvar Table 3, 4, 5, and 6:

Table 8a– South Butvar	
EU #	**Special Terms and Conditions**
142S01 142S02 142S04 142S08 142S10 142S15	Solutia shall **1)** In accordance with MassDEP Approval Trans. #46118 (1/15/1993) and #PV-87-IF-023 (3/22/1988), Solutia shall test the high temperature and no-flow alarms monthly. **2)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., Solutia shall operate and maintain the condensers in accordance with the manufacturer's recommendations or in accordance with other written procedures in order to ensure that they are operate at their design heat transfer efficiency.
142S06 142S11	Solutia shall <u>If operating under MassDEP RACT Approval (6/20/1989), MassDEP Approval #PV-85-IF-012 (10/29/1985; amended 8/25/1987), and 310 CMR 7.18(17),</u> **3)** Solutia shall ensure that the scrubber operates with liquor recirculation only if emission tests demonstrate that the design scrubbing efficiencies for each VOC will be maintained and the modified operation is approved by the MassDEP in writing. **4)** Solutia shall ensure that the scrubber achieves the design efficiencies (specified in the October 29, 1985 Plan Approval) for every three-hour operating interval. In order to assure that the design efficiencies are being maintained, the water feed valve on the scrubber shall be locked (or interlocked with the process controller) such that a flow rate of ≥ 215 gpm is supplied to the scrubber, and the scrubber shall be alarmed at a flow of ≤ 180 gpm. **5)** Solutia shall ensure that the scrubber maintains its rated VOC removal efficiency by following standard operating procedures (SOP) and standard maintenance procedures (SMP), that have been specifically developed for this scrubber. The SOP and SMP shall be permanently maintained in the control room. <u>If operating under MassDEP Approval #1-P-92-006 (5/26/1992),</u> **6)** In accordance with MassDEP Approval #1-P-01-068 (12/19/2001), Solutia shall ensure that total flow to any one cell of the biofilter shall be ≤ 8670 ACFM at all times. If flow exceeds this value, Solutia shall correct the situation within 1 business day of discovery, or otherwise shutdown the biofilter (with the existing permit option to revert to VOC control via the scrubber alone) as expeditiously as possible in order to correct the problem. **7)** Solutia shall ensure that the compost bed depth is ≥ 2 feet 11 inches at all times. (The design depth of the bed is 3 feet 3 inches.) If the compost bed depth is outside this range, Solutia shall correct the situation within 5 business days of discovery, or otherwise shutdown the Biofilter (with the existing permit option to revert to VOC control via the scrubber alone) as expeditiously as possible in order to correct the problem. **8)** In accordance with MassDEP Approval #1-P-03-008 (3/25/2003), Solutia shall ensure that annual calibration (at least once per calendar year) of the flow and pressure drop indicators is performed, in accordance with the manufacturer's recommendations.

Table 8b– South Butvar	
EU #	**Special Terms and Conditions**
142S004	Solutia shall **9)** In accordance with the MassDEP RACT Approval (June 20, 1989), Solutia shall ensure that the hydrolysis reactors are equipped with properly functioning mechanical seals.
142S15	Solutia shall **10)** In accordance with MassDEP Approval Trans. #50851 (10/30/1992), Solutia shall ensure, as much as is practical, that all scheduled maintenance activities for the scrubber that necessitates reverting to the MassDEP RACT Approval (6/20/1989) permit conditions for that emission vent are only performed during the non-ozone months; that is between September 15th and May 1st. Any scheduled routine maintenance of this type that must occur during the "ozone season" must be authorized by the MassDEP in writing.
142S05 142S12 142S13 142S14	Solutia shall **11)** In accordance with the MassDEP RACT Approval (June 20, 1989), there are no controls or restrictions for these emission units under the MassDEP RACT Approval (6/20/1989).
142S02 142S03 142S06 142S07 142S11 142S15	Solutia shall **12)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.
Process-Wide	Solutia shall **13)** In accordance with 40 CFR 63 Subpart FFFF, including the General Conditions referenced in Table 12 of that Subpart, comply with all applicable Subpart FFFF provisions in accordance with the applicable timelines. The final compliance date for 40 CFR 63 Subpart FFFF is 05/10/2008.

IV. Resimenes – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1a – Resimenes

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
Resimenes	***Manufacturing of melamine-formaldehyde resins***			
081 S001	Resimene Raw Material: Recycle, Blending & Storage			
	# 1 Tank (isobutanol storage)	TFK T215	25,800 gallons	packed bed scrubber
	#14 Tank (methanol storage)	TFK T214	28,100 gallons	packed bed scrubber
	# 3 Tank (n-butanol storage)	TFK T320	25,800 gallons	packed bed scrubber
	# 9 Tank (n-butanol storage)	TFK T321	25,800 gallons	packed bed scrubber
	# 5 Tank (CD Distillate; wet butanol storage)	TFK T213	25,800 gallons	packed bed scrubber
	#17 Tank (wet methanol storage)	TFK T211	36,800 gallons	packed bed scrubber
	#18 Tank (wet methanol storage)	TFK T211	22,700 gallons	packed bed scrubber
	#19 Tank (wet methanol storage)	TFK T211	30,000 gallons	packed bed scrubber
	# 4 Tank (wet butanol storage)	TFK T220	25,800 gallons	packed bed scrubber
	#16 Tank (wet butanol storage)	TFK T220	15,000 gallons	packed bed scrubber
	# 7 Tank (CD distillate storage)	TFK T219	25,800 gallons	packed bed scrubber
	# 6 Tank (methanol distillate storage)	TFK T323	4,400 gallons	packed bed scrubber
	#10 Tank (8% butanol storage)	TFK T323	15,600 gallons	packed bed scrubber
	#13 Tank (isopropanol storage)	TFK T322	15,000 gallons	packed bed scrubber
081 S001b	#21 Tank (methanol storage)	TFK T224	30,000 gallons	vapor return; cons. vent
	#24 Tank (methanol storage)	TFK T225	30,000 gallons	vapor return; cons. vent
081 S001c	#22 Tank (formaldehyde solution)	TFK T226	35,000 gallons	packed tower scrubber
	#23 Tank (formaldehyde solution)	TFK T227	80,000 gallons	packed tower scrubber
081 S001d	Formaldehyde loading	TFK P001		vapor return; scrubber
081 S002	Resimene Melamine Transfer & Storage			
	Bulk Melamine Silo	081 P030	7,500 ft^3	cyclone & fabric filter
	#1 Kettle, Melamine Blower, Baghouse, & Weigh Hopper	087 P001		cyclone & fabric filter
	#6 Kettle, Melamine Blower, Baghouse, & Weigh Hopper	081 P011		cyclone & fabric filter
	#7 Kettle, Baghouse, & Weigh Hopper	081 P001		cyclone & fabric filter
081 S003	#1 Reactor System			
	#1 Kettle, #1 Distillate Receiver, & #1 Hold Tank	087 P002		condensers, vacuum jets, and scrubber
081 S004	#6 Reactor System			
	#6 Kettle, #6 Distillate Receiver, #6b Hold Tank	081 P012		condensers, vacuum jets, venturi scrubber, packed bed scrubber
081 S004b	#7 Reactor System			
	#7 Kettle, #7 Distillate Receiver	081 P012		condensers, vacuum jets, venturi scrubber, & packed bed scrubber
	DE Filter, Filter heel tank, Tote Exhaust	081 P112		packed bed scrubber

Table 1b – Resimenes				
Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
081 S005	Heinkel Filter System			
	#1 Heinkel Filter Centrifuge, Cyclone, Pump Tank,	087 P003		packed bed scrubber
	Solids Tank	081 P036		packed bed scrubber
	#6 Heinkel Filter Centrifuge, Cyclone, Pump Tank, Solids Tank	081 P035		packed bed scrubber
	#7 Heinkel Filter Centrifuge, Cyclone, Pump Tank, Solids Tank			
081 S006	Resimene Product Blending & Storage Tanks			
	#5 Blend Tank	081 P019	15,000 gallons	packed bed scrubber
	#6 Blend Tank	081 P020	15,000 gallons	packed bed scrubber
	#7 Blend Tank	081 P021	14,125 gallons	packed bed scrubber
	#7 Hold Tank	081 P015	8,300 gallons	packed bed scrubber
	#8 Blend Tank	081 P019	14,000 gallons	packed bed scrubber
	#9 Blend Tank	081 P037	24,500 gallons	packed bed scrubber
	#10 Blend Tank	081 P038	24,500 gallons	packed bed scrubber
081 S007	Resimene Formaldehyde Recovery Distillation Column, Condenser, Reflux Drum, Day Tank, & Deacidifiers	081 P023	36,000 gallons	packed bed scrubber
081 S008	Butanol Recovery Distillation Column, Still Pots, Condenser, Phase Separator, Reflux Drum & Wet Receiver	081 P025		packed bed scrubber

IV. Resimenes – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3a – Resimenes

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
081 S001	solvents & liquid/solid resins	volatile organic compounds	scrubber efficiency ≥ 90%	MassDEP Approval Trans. #8292 (10/9/92) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/89) MassDEP Approval 1-P-09-002 (5/26/2009)
081 S001b	solvents & liquid/solid resins	volatile organic compounds	vapor recovery control efficiency ≥ 90%	MassDEP Approval 1-P-95-078 (11/17/95)
081 S001c	solvents & liquid/solid resins	volatile organic compounds	scrubber efficiency ≥ 95%	MassDEP Approval 1-P-96-039 (8/23/96; amended 7/28/98) 40 CFR Part 60, Subpart Kb MassDEP Approval 1-P-09-002 (5/26/2009)
081 S001d	solvents & liquid/solid resins	volatile organic compounds	scrubber efficiency ≥ 95%	Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/89) MassDEP Communication (5/15/1991) MassDEP Approval 1-P-09-002 (5/26/2009)
081 S002	solvents & liquid/solid resins	particulate matter	baghouse/cyclone efficiency ≥ 99%	MassDEP Approval #PV-87-IF-011 (11/30/87) MassDEP Approval 1-P-09-002 (5/26/2009)
081 S003	solvents & liquid/solid resins	volatile organic compounds	packed bed scrubber efficiency ≥ 93% organic HAP emissions for the batch cycle reduced by ≥ 83%	MassDEP Approval #PV-87-IF-011 (11/30/87) MassDEP Approval #1-P-95-063 (10/5/95) MassDEP Approval 1-P-09-002 (5/26/2009) 40 CFR Part 63.1406(a)(2)ii (Subpart OOO; Amino/Phenolic Resins)
081 S004	solvents & liquid/solid resins	volatile organic compounds	packed bed scrubber efficiency ≥ 93%, or ≤0.010 lb/hr formaldehyde; ≤0.030 lb/hr butanol; ≤0.010 lb/hr methanol, whichever is less restrictive, and organic HAP emissions for the batch cycle reduced by ≥ 83%	MassDEP Approval # 1-P-04-029 (9/14/2004; amended 10/18/2004) MassDEP Approval 1-P-09-002 (5/26/2009) MassDEP Approval #1-P-93-031 (3/11/94 & 9/12/00) 40 CFR Part 63.1406(a)(2)ii (Subpart OOO; Amino/Phenolic Resins)

Table 3b – Resimenes

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
081 S004b	solvents & liquid/solid resins	volatile organic compounds	Packed bed scrubber efficiency ≥ 93%, or	MassDEP Approval # 1-P-04-029 (9/14/2004; amended 10/18/2004) MassDEP Approval 1-P-09-002 (5/26/2009)
			≤0.010 lb/hr formaldehyde; ≤ 0.030 lb/hr butanol; ≤ 0.010 lb/hr methanol, whichever is less restrictive, and	MassDEP Approval #1-P-93-031 (3/11/94 & 9/12/00)
			organic HAP emissions for the batch cycle reduced by ≥ 83%	40 CFR Part 63.1406(a)(2)ii (Subpart OOO; Amino/Phenolic Resins) MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007)
081 S005	solvents & liquid/solid resins	volatile organic compounds	scrubber efficiency ≥ 90%	MassDEP Approval #1-P-95-018 (10/5/95) MassDEP Approval #PV-86-IF-009 (8/11/86) MassDEP Approval # 1-P-87-IF-009 (7/30/87) MassDEP Approval #1-P-88-007 (8/17/88) MassDEP Approval 1-P-09-002 (5/26/2009)
			organic HAP emissions for the batch cycle reduced by ≥ 62%	40 CFR Part 63.1407(a)(3)ii (Subpart OOO; Amino/Phenolic Resins)
081 S006	solvents and liquid/solid resins	volatile organic compounds	scrubber efficiency ≥ 90%	MassDEP Approval Trans. #8292 (10/9/92) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/89) MassDEP Approval #PV-78-IF-004 (5/26/78) MassDEP Approval #PV-87-IF-009 (7/30/87) MassDEP Approval 1-P-09-002 (5/26/2009)
081 S007	solvents and liquid/solid resins	volatile organic compounds	≥2.1 gpm flow to the packed bed scrubber outlet concentration ≤ 23 ppm formaldehyde	MassDEP Approval #PV-79-IF-009 (6/27/79) MassDEP Approval 1-P-09-002 (5/26/2009)
081 S008	solvents and liquid/solid resins	volatile organic compounds	scrubber efficiency ≥ 90%	MassDEP Approval Trans. #8292 (10/9/92) MassDEP Approval #1-P-95-016 (7/13/95) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/89) MassDEP Approval 1-P-09-002 (5/26/2009)
			organic HAP emissions for the batch cycle reduced by ≥ 62%	40 CFR Part 63.1407(a)(3)ii (Subpart OOO; Amino/Phenolic Resins)

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4a – Resimenes

EU #	Monitoring/Testing Requirements
081 S001 081 S006 081 S008	Solutia shall **1)** In accordance with MassDEP Approval Trans. #8292 (10/9/1992), operate and maintain a low/no flow alarm system that will trigger at no less than ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 90% removal efficiency for non-hydrophobic hydrocarbons).. **2)** Test the scrubber water flow alarm for proper operation at least once per calendar month. **3)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, ensure the scrubber water low/no flow alarm is operating at all times the scrubber is operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s). Solutia shall obtain valid data from the low/no flow alarm monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S001b	Solutia shall **4)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., verify at least annually that signs are present at the loading rack(s) indicating that the vapor recovery system must be used by all trucks/rail cars unloading product. This monitoring may be performed concurrently with the leak detection and repair performed at these emission units. **5)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., monitor tank trucks/rail cars that are unloading organic materials to ensure they have current leak testing markings/signage indicating they have been leak tested in accordance with applicable leak testing requirements.
081 S001c	Solutia shall **6)** In accordance with MassDEP Approval #1-P-96-039 (8/23/1996), continuously monitor water flow to the scrubber. **7)** In accordance with MassDEP Approval #1-P-96-039 (8/23/1996), set the water flow alarm for the scrubber to activate when water flow is less than ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 95% removal efficiency). **8)** Solutia shall obtain valid data from the scrubber flow monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S001d	Solutia shall **9)** In accordance with letters to MassDEP (8/26/1994 & 5/15/1991) and 310 CMR 7.00 Appendix C(9)(b)2., continuously monitor water flow to the scrubber to ensure it is maintained at 9 ±2 gpm when the truck loading operations are being performed. **10)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the scrubber flow monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance. **11)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., monitor tank trucks before loading begins to ensure that they have been leak checked within the last year.

Table 4b – Resimenes

EU #	Monitoring/Testing Requirements
081 S002	Solutia shall **12)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the monitoring equipment for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S003	Solutia shall **13)** In accordance with MassDEP Approval #1-P-95-063 (10/5/1995) and 40 CFR Part 63.1415 (Subpart OOO; Amino/Phenolic Resins), continuously monitor the water flow to the scrubber. **14)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the monitoring equipment for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S004	Solutia shall **15)** In accordance with MassDEP Approval #1-P-93-031 (3/11/1994 & 9/12/2000), 310 CMR 7.00 Appendix C(9)(b)2., and 40 CFR Part 63.1415 (Subpart OOO; Amino/Phenolic Resins), continuously monitor the water flow to the packed column scrubber. **16)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the scrubber flow monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S004b	Solutia shall **17)** In accordance with MassDEP Approval #1-P-93-031 (3/11/1994 & 9/12/2000), MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), 310 CMR 7.00 Appendix C(9)(b)2., and 40 CFR Part 63 Subpart OOO, continuously monitor the water flow to the packed column scrubber. **18)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the scrubber flow monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S005	Solutia shall **19)** In accordance with MassDEP Approval #1-P-95-018 (10/5/1995), 310 CMR 7.00 Appendix C(9)(b)2., and 40 CFR Part 63.1415 (Subpart OOO; Amino/Phenolic Resins), continuously monitor the water flow to each of the three scrubbers. **20)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the scrubber flow monitors for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
081 S007	Solutia shall **21)** In accordance with MassDEP Approval #PV-79-IF-009 (7/27/1979) and 310 CMR 7.00 Appendix C(9)(b)2., monitor water flow to the packed bed scrubber at least once per calendar day to ensure it is maintained at ≥ 2.1 gpm.

Table 4c – Resimenes	
EU #	**Monitoring/Testing Requirements**
081 S008	Solutia shall **22)** In accordance with 40 CFR Part 63.1415 (Subpart OOO; Amino/Phenolic Resins), daily monitor the water flow to the scrubber.
all applicable components in HAP service	Solutia shall **23)** In accordance with 40 CFR Part 63.1410 (Subpart OOO; Equipment leak provisions), monitor for leaks by complying with the requirements of 40 CFR part 63, Subpart UU (national emission standards for equipment leaks) for all equipment, as defined under §63.1402, that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more.
all applicable components in VOC service	Solutia shall **24)** In accordance with MassDEP RACT Leak Detection and Repair Program Approval (4/14/1987), MassDEP RACT Approval (6/20/1989), and 310 CMR 7.00 Appendix C(9)(b)2., implement leak detection and repair procedures according to the "Standards of Performance for New Stationary Sources; Synthetic Organic Chemical Manufacturing Industry; Equipment Leaks of VOC" dated October 13, 1983 for all applicable components in VOC service. In cases where the specific equipment components with the potential to leak VOC from this process are not addressed in this document, the CTG document "Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment" dated March 1984 and past MassDEP policy will serve to determine what procedures will be implemented, except that the more frequent leak checking intervals and quicker repair turnarounds specified in the former document will apply.
Site-Wide	**See Site-Wide Testing/Monitoring Requirements**

Table 5a – Resimenes

EU #	Record-keeping Requirements
081 S001 081 S006 081 S008	Solutia shall **1)** In accordance with MassDEP Approval Trans. #8292 (10/9/1992) and 310 CMR 7.00 Appendix C(10)(b), maintain a record of all scrubber low/no flow alarms and make this log available to the MassDEP upon request. **2)** In accordance with MassDEP Approval Trans. #8292 (10/9/1992) and 310 CMR 7.00 Appendix C(10)(b), maintain a record of all scrubber alarm downtime and make this log available to the MassDEP upon request.
081 S001b	Solutia shall **3)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records of the presence of signs at the loading rack(s) indicating that the vapor recovery system must be used by all trucks/rail cars unloading product. This recordkeeping may be part of the leak detection and repair recordkeeping performed at these emission units. **4)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records (a checklist is acceptable) for each tank truck/rail car unloading operation indicating that the tank truck/rail car has current leak-test markings/signage indicating it has been leak tested in accordance with applicable leak testing requirements.
081 S001c	Solutia shall **5)** In accordance with MassDEP Approval #1-P-96-039 (8/23/1996), maintain a record of all scrubber low/no flow alarms and make this log available to the MassDEP upon request. **6)** In accordance with 40 CFR Part 60 Subpart Kb §60.110b(a) and §60.116b(b), keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. **7)** In accordance with 40 CFR Part 60 Subpart Kb §60.116b(c), maintain a record of the volatile organic liquid ("VOL") stored, the period of storage, and the maximum true vapor pressure of the VOL.
081 S001d	Solutia shall **8)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records of water flow to the scrubber during all truck loading operations, and make this record available to the MassDEP upon request. **9)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records (a checklist is acceptable) for each tank truck loading operation indicating that the tank truck has current leak-test markings/signage indicating it has been leak tested in accordance with applicable leak testing requirements.
081 S003	Solutia shall **10)** In accordance with MassDEP Approval #1-P-95-063 (10/5/1995), maintain a record of all scrubber low flow alarms and make this log available to the MassDEP upon request.

Table 5b – Resimenes

EU #	Record-keeping Requirements
081 S004	Solutia shall **11)** In accordance with MassDEP Approval #1-P-93-031 (3/11/1994 & 9/12/2000) and 310 CMR 7.00 Appendix C(9)(d), maintain a record of all packed column low/no flow alarms, and make this log available to the MassDEP upon request.
081 S004b	Solutia shall **12)** In accordance with MassDEP Approval #1-P-93-031 (3/11/1994 & 9/12/2000), MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), and 310 CMR 7.00 Appendix C(9)(d), maintain a record of all packed column low/no flow alarms, and make this log available to the MassDEP upon request. **13)** In accordance with 40 CFR 63:1416 (Subpart OOO; Amino/Phenolic Resins); comply with the recordkeeping requirements therein.
081 S005	Solutia shall **14)** In accordance with MassDEP Approval #1-P-95-018 (10/5/1995) and 310 CMR 7.00 Appendix C(9)(d), maintain a record of all scrubber low flow alarms and make this log available to the MassDEP upon request.
081 S007	Solutia shall **15)** In accordance with MassDEP Approval #PV-79-IF-009 and 310 CMR 7.00 Appendix C(9)(d), maintain records of the daily flow readings for the packed bed scrubber.
081 S003 081 S004 081 S005 081 S008	Solutia shall **16)** In accordance with 40 CFR 63.1416 (Subpart OOO; Amino/Phenolic Resins), comply with the recordkeeping requirements therein.
all	Solutia shall **17)** In accordance with 40 CFR Part 63.1038 (Subpart UU; Leak Detection), maintain records as specified therein.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – Resimenes

EU #	Reporting Requirements
081 S003 081 S004 081 S004b 081 S005 081 S008	Solutia shall **1)** In accordance with 40 CFR 63.1417 (Subpart OOO; Amino/Phenolic Resins), submit semi-annual compliance reports to the MassDEP as required therein.
all applicable components in HAP service	Solutia shall **2)** In accordance with 40 CFR Part 63.1039 (Subpart UU; Leak Detection), submit reports to the MassDEP as required therein.
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

Resimenes Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in **Resimenes** Table 3, 4, 5, and 6:

Table 8a – Resimenes

EU #	Special Terms and Conditions
081 S001 081 S006 081 S008	Solutia shall **1)** In accordance with MassDEP Approval Trans. #8292 (10/9/1992), set the water flow alarm to the scrubber at no less than ½ of the optimized water flow (the flow rate that results in ≥ 90% removal efficiency for non-hydrophobic hydrocarbons). **2)** In accordance with MassDEP Approval Transmittal #8292 (10/9/1992), ensure that all scheduled maintenance activities for the scrubber that necessitates reverting to the MassDEP RACT Approval (6/20/1989) permit conditions for that emission vent are only performed during the non-ozone months (October 1 through April 30). Any scheduled routine maintenance of this type that must occur during May 1 through September 30 must be approved beforehand by the MassDEP in writing.
081 S001b	Solutia shall **3)** In accordance with MassDEP Approval #1-P-95-078 (11/17/1995), post conspicuous signs at the unloading rack specifying that a properly operating and leak tight vapor recovery system must be used by all trucks/rail cars unloading product. **4)** In accordance with MassDEP Approval #1-P-95-078 (11/17/1995) and 310 CMR 7.00 Appendix C(9)(b)2., not permit any truck/rail car to unload product at the loading rack unless it has current leak testing markings/signage indicating it has been leak tested in accordance with applicable leak testing requirements. **5)** In accordance with MassDEP Approval #1-P-95-078 (11/17/1995), include all potential sources of leaks from the vapor return system in a Leak Detection and Repair (LDAR) program.
081 S003	Solutia shall **6)** In accordance with MassDEP Approval #1-P-95-063 (10/5/1995), operate the scrubber with an instantaneous water flow rate of no less than 14.0 gpm. **7)** In accordance with MassDEP Approval #1-P-95-063 (10/5/1995), set the scrubber low flow alarm to sound if water flow drops to 10 gpm or less.
081 S004	Solutia shall **8)** In accordance with MassDEP Approval #1-P-93-031 (3/11/1994), operate the packed column scrubber with an instantaneous water flow rate of greater than 12 gpm. **9)** In accordance with MassDEP Approval #1-P-93-031 (3/11/1994), set the packed column scrubber low flow alarm to sound if water flow drops to 12 gpm or less.
081 S005	Solutia shall **10)** In accordance with MassDEP Approval #1-P-95-018 (10/5/1995), operate each scrubber with an instantaneous water flow rate of ≥ 1.0 gpm. **11)** In accordance with MassDEP Approval #1-P-95-018 (10/5/1995), set the scrubber low flow alarm to sound if water flow drops to <1.0 gpm.

Table 8b – Resimenes

<table>
<tr><th>EU #</th><th>Special Terms and Conditions</th></tr>
<tr><td>081 S003
081 S004
081 S004b
081 S005
081 S008</td><td>Solutia shall
12) In accordance with 40 CFR 63.1-15, Subpart A, "General Provisions" [as indicated in Table 1 to Subpart OOO of 40 CFR 63], comply with all applicable provisions therein.</td></tr>
<tr><td>081S001b
081S001c
081S001d</td><td>Solutia shall
13) In accordance with 40 CFR 63, Subpart EEEE (Organic Liquid Distribution-Non gasoline), including the General Conditions referenced in Table 12 of that Subpart, although no emission limits apply, comply with the applicable requirements stated therein. Final compliance date for Solutia for 40 CFR 63, Subpart EEEE is 2/5/2007.</td></tr>
<tr><td>081S001
081S004b
081S006</td><td>Solutia shall
14) In accordance with MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), ensure that the minimum scrubber water flows are set at the following values:
<table>
<tr><th>Scrubber Designation</th><th>Minimum flow (gallons per minute)</th></tr>
<tr><td>#7 Blend Tank scrubber (Stack #081 P021)</td><td>0.65</td></tr>
<tr><td>#13 Tank scrubber (Stack #TFK T322)</td><td>1.28</td></tr>
<tr><td>#14 Tank scrubber (Stack TFK T214)</td><td>1.15</td></tr>
<tr><td>DE Filter/Heel Tank scrubber (Stack #081 P112)</td><td>1.75</td></tr>
</table>
15) In accordance with MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), operate and maintain a low/no flow alarm system for the scrubbers referenced above that will trigger at no less than 80% of the minimum scrubber water flow rate.

16) In accordance with MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), test these scrubber water flow alarms for proper operation at least once per calendar month.

17) In accordance with MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), ensure the scrubber water low/no flow alarms are operating at all times the scrubbers are operating, except for periods of calibration checks, zero and span adjustments, preventive maintenance, and malfunction(s).

18) In accordance with MassDEP Approval #1-P-07-023 (9/4/2007; amended 11/20/2007), obtain valid data from the low/no flow alarm monitors for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.</td></tr>
</table>

Table 8c– Resimenes	
EU #	**Special Terms and Conditions**
EU 81S004b	Solutia shall **19)** In accordance with DEP Approval #1-P-93-031 (3/11/1994) and 40 CFR Part 63 Subpart OOO, operate the packed column scrubber (Stack #081 P012; #7 Kettle) with an instantaneous water flow rate of greater than 12 gpm. **20)** In accordance with DEP Approval #1-P-93-031 (3/11/1994), set the packed column scrubber (Stack #081 P012; #7 Kettle) low flow alarm to sound if water flow drops to 12 gpm or less.
081S001 081S001c 081S001d 081S002 081S003 081S004 081S004b 081S005 081S006 081S007 081S008	Solutia shall **21)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.
All applicable components in HAP service	Solutia shall **22)** In accordance with 40 CFR 63.1024 (Subpart UU; Leak Detection), repair leaking components as specified therein.

V. Saflex – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1 – Saflex

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
Saflex	***Manufacturing of polyvinyl butyral sheets***			
099 S001	Saflex Resin Handling			
	Resin Silo #1 & Box Transfer Blower	099 P054		fabric filter
	Resin Silo #2	099 P055		fabric filter
	Resin Silo #3	099 P056		fabric filter
	Resin Silo #4	099 P057		fabric filter
	Resin Silo #5	099 P058		fabric filter
	Resin Silo #6	099 P059		fabric filter
	Resin Silo #7	099 P060		fabric filter
	Resin Collector (box tipper, collector & vacuum blower)	099 P061		fabric filter
	E. Resin Surge Hopper & Transfer Blower	099 P062		fabric filter
	W. Resin Surge Hopper & Transfer Blower	099 P063		fabric filter
	N. Resin Surge Hopper & Transfer Blower	099 P064		fabric filter
	S. Resin Surge Hopper & Transfer Blower	099 P065		fabric filter
099 S002	Saflex E-line Scrap Handling			
	Blower & S. Cyclone for premix blender	091 P007		cyclone
	Edge/Center Trim Granulator, Blower & N. Cyclone for Premix Blender	091 P006		cyclone cyclone
	#1 Scrap & C.R. Granulators, BF05/BF06 Blowers & S. Cyclone for Scrap Blender	091 P008		cyclone
	#2 Scrap Granulator, BF07/BF08 Blowers & N. Cyclone for Scrap Blender	091 P066		
099 S003	Saflex PEG Recycle Scrap Handling			
	E. & W. Mixed Scrap Granulators, Blower, & Cyclone #1	099 P017		cyclone
	N. S. & S.E. Mixed Scrap Granulators, Blower, & Cyclone #2	099 P018		cyclone
	Customer Return Granulator, Blower, & Cyclone #3	099 P019		cyclone
	N. or S. or S.E. or E. or W. Granulators, Unit or Trim Blowers, & Box Cyclone	099 P022		cyclone
099 S005a	Saflex Extrusion E-Line			
	Mixers #1 & #2, Coolers #1 & #2, Rework Blender, Premix Blender, Extruder with Vacuum Vent, Vent Condenser, Tank, Vacuum Pump, Die Hood, Normalizer, Brinks Mist Eliminator, & Ducon Wet Scrubber	099 P005[1]		scrubber
099 S005b	Saflex On-Line SV unit	099 P105		none
099 S006	Saflex Extrusion PEG Line			
	Resin Weigh Case, Rework Blender, Scrap Feeder, Mixers, Cooler, Granulator, Premix Blender, Nauta Feeder, Extruder with Vacuum Vent, Vent Condenser, Catch Tank, Vacuum Pump, & Ducon Wet Scrubber	099 P005[1]		scrubber

(1) The scrubber stack tip stands 46 feet above ground level, 10 feet above the scrubber top, and 5 feet above roof level. It has an inside diameter of 30 inches.

V. Saflex – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3 – Saflex

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
099 S001	polyvinyl butyral resin	particulate matter	≥ 99.5% control	MassDEP Approval #1-P-89-114 (5/7/90) MassDEP Approval 1-P-09-002 (5/26/2009)
099 S002	polyvinyl butyral scrap plastic sheet	particulate matter	≥ 99.8% control for particles ≥ 50 µm	MassDEP Approval #PV-83-IF-002 (3/7/83) MassDEP Approval 1-P-09-002 (5/26/2009)
099 S003	polyvinyl butyral scrap plastic sheet	particulate matter	≥ 99.8% control for particles ≥ 50 µm ≥ 99.5% control	MassDEP Approval #PV-83-IF-003 (3/17/83) MassDEP Approval #1-P-89-114 (5/7/90) MassDEP Approval 1-P-09-002 (5/26/2009)
099 S005a	polyvinyl butyral resin & plasticizers	volatile organic compounds	≥ 85% VOC control ≥ 300 gallons/minute water flow	MassDEP Approval #PV-88-IF-004 (5/20/88) MassDEP RACT Approval (6/20/89) MassDEP Approval #1-P-93-007 (4/16/93) MassDEP Approval 1-P-09-002 (5/26/2009)
099 S005b	polyvinyl butyral plastic sheet	volatile organic compounds	≤ 4.9 tpy from SV process exhaust	MassDEP Approval #1-P-01-007 (4/24/01)
099 S006	polyvinyl butyral resin & plasticizers	volatile organic compounds	≥ 85% VOC control ≥ 300 gallons/minute water flow	MassDEP Approval #PV-88-IF-004 (5/20/88) MassDEP Approval #1-P-92-016 (6/25/92) MassDEP Approval #1-P-93-007 (4/16/93) MassDEP Approval 1-P-09-002 (5/26/2009)

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4 – Saflex

EU #	Monitoring/Testing Requirements
099 S005a 099 S006	Solutia shall **1)** In accordance with MassDEP Approval #PV-88-IF-004 (5/20/88), continuously monitor the scrubber water flow to ensure ≥ 300 gallon per minute, or ≥ the value at which the compliance test, verifying 85% VOC removal efficiency, was performed. **2)** In accordance with MassDEP Approval #PV-88-IF-004 (5/20/88), continuously monitor the scrubber water flow and alarm at 270 gpm or at 90% of the flow rate at which the compliance test, verifying 85% VOC removal efficiency, was performed. **3)** In accordance with MassDEP Approval #PV-88-IF-004 (5/20/88), test the scrubber low flow alarm for proper operation at least once per calendar month, and maintain a log of the test results. **4)** In accordance with 310 CMR 7.00 Appendix C(9)(b), obtain valid data from the water flow monitor and data logging system for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
099 S005b	Solutia shall **5)** In accordance with MassDEP Approval #1-P-01-007 (4/24/01), monitor material throughput to ensure that VOC emissions do not exceed 4.9 tons per year (rolling 12-month total).
Site-Wide	**See Site-Wide Testing/Monitoring Requirements**

Table 5 – Saflex

EU #	Record-keeping Requirements
099 S005a 099 S006	Solutia shall **1)** In accordance with MassDEP Approval #PV-88-IF-004 (5/20/88), maintain a log of all scrubber low flow alarms documenting minimally the date, time, cause of the alarm, the corrective measures taken, and when the scrubber was operating normally again. **2)** In accordance with 310 CMR 7.00 Appendix C(10)(b), maintain records of water flow monitor downtime in order to verify compliance with the data capture requirements required herein.
099 S005b	Solutia shall **3)** In accordance with MassDEP Approval #1-P-01-007 (4/24/01), maintain records of material throughput on a monthly basis to ensure that VOC emissions do not exceed 4.9 tons per year (rolling 12-month total).
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – Saflex

EU #	Reporting Requirements
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

Saflex Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in Saflex Table 3, 4, 5, and 6:

Table 8 – Saflex

EU #	Special Terms and Conditions
099 S002	**Solutia shall** **1)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown, whenever the Saflex® E-Line scrap handling equipment is in operation.
099 S003	**Solutia shall** **2)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown, whenever the Saflex® PEG Recycle Scrap Handling equipment is in operation.
099 S005a 099 S006	Solutia shall **3)** In accordance with MassDEP Approval #PV-88-IF-004 (5/20/88), have available at the scrubber control room an up-to-date copy of the "Standard Operating and Maintenance Procedure" (SOMP) for the scrubber which documents how the scrubber efficiency is to be maintained at design specifications. **4)** In accordance with MassDEP Approval #PV-88-IF-004 (5/20/88), ensure that the SOMP for the scrubber is adhered to.
099 S002	Solutia shall **5)** In accordance with MassDEP Approval 1-P-03-007 (3/11/03), process in the polyvinyl butyral E-Line (extrusion line) up to 100% polyvinyl butyral resin originating from the South Butvar (solvent based) process.
099 S001 099 S002 099 S003 099 S005a 099 S006	Solutia shall **6)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.

VI. RB-9100 – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1 – RB-9100

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
RB-9100	***Manufacturing of polyvinyl butyral resin***			
092 S01	RB-9100 Process Vents Pre-Mix Weigh tank, Butyraldehyde Weigh Tank, 2 Acetal Reactors, 2 Resin Wash Tanks, & SLG tank	092 P001		Heat Transfer Systems, Inc., scrubber
092 S02	Butyraldehyde Storage Tanks #1 Storage Tank #2 Storage Tank	 092 T005 092 T006	 30,000 gallons 30,000 gallons	 conservation vents & vapor balance
092 S03	Raw Material & Product Transfer, Storage, & Blending Polyvinyl Alcohol Unloading Collector Polyvinyl Alcohol Storage (4 silos) Polyvinyl Alcohol Weigh Hopper Polyvinyl Butyral Storage Silo (5000 ft.^{3}) Polyvinyl Butyral Storage Silo (5000 ft.^{3}) Polyvinyl Butyral Storage Silo (5000 ft.^{3}) Polyvinyl Butyral Storage Silo (5000 ft.^{3}) Polyvinyl Butyral Storage Silo (5000 ft.^{3}) Polyvinyl Butyral Storage Silo (5000 ft.^{3}) Polyvinyl Alcohol Dissolvers (2) Crushed Resin Collector Re-Circulation Collector Packout Hopper (2000 ft.^{3})	 092 P003 092 P004 092 P013 092 P007 092 P008 092 P009 092 P010 092 P011 092 P012 092 P014 092 P015 092 P035 092 P016		 Mikro-Pulsaire Model 42-8-22 C; 1500 acfm Mikro-Pulsaire Model 42-8-100 B; 2400 acfm Six (6) Mikro-Pulsaire Model 31-8-100 C; 1320 acfm each Emissions directed to Polyvinyl Alcohol storage (4 silos) baghouse (Stack 092 P004) Mikro-Pulsaire, Model 19-8-130 C; 600 acfm Flex-Kleen Model 84CT-38; 1500 acfm Mikro-Pulsaire Model 31-8-230 B; 1320 acfm
092 S04	Product Transfer, Storage, & Blending Polyvinyl Butyral Bulk Blender Product Storage Silo #7 Product Storage Silo #8	 092 P026 092 P027 092 P028		 Three (3) MAC Vent Filters Model 96AVR21
092 S05	Resin Drying Dryer	 092 P033 092 P034		 High Eff. Cyclone #1 High Eff. Cyclone #2

VI. RB-9100 – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3 – RB-9100

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
092 S01[1]	volatile organic compounds & resins	volatile organic compounds & butyraldehyde	≥ 95% VOC control	MassDEP Approval #1-P-99-020 (8/2/1999) MassDEP Approval #PV-85-IF-010 (1/16/1985) MassDEP Approval 1-P-09-002 (5/26/2009)
092 S02	butyraldehyde	volatile organic compounds & butyraldehyde	≥ 90% VOC control over each unloading operation	MassDEP Approval #PV-85-IF-010 (1/16/1985)
092 S03	resins	particulate matter	≥ 99.98% particulate control; ≤ 0.02 gr/ACF outlet loading	MassDEP Approval #PV-85-IF-010 (1/16/1985) MassDEP Approval 1-P-09-002 (5/26/2009)
092 S04	resins	particulate matter	≥ 99.98% particulate control ≤ 0.47 lb/hr	MassDEP Approval #1-P-90-045 (7/12/1990) MassDEP Approval 1-P-09-002 (5/26/2009)
092 S05	resins	particulate matter	≥ 99.98% particulate control ≤ 0.01 gr/ACF; ≤ 1.9 pounds/hour	MassDEP Approval #PV-85-IF-010 (1/16/1985) MassDEP Approval #1-P-99-020 (8/2/1999) MassDEP Approval 1-P-09-002 (5/26/2009)
Process-Wide	resin	resin	≤ 82.3 x 10^6 lb resin production/year [(2)] ≤ 8.00 x 10^6 lb resin production/month [(3)]	MassDEP Approval #1-P-08-005 (04/11/2008)

(1) Stack parameters:
height = 150 foot (95 feet above the tallest part of the building structure)
internal diameter = 24 inches
(2) rolling 12-month total
(3) calendar month

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4– RB-9100

EU #	Monitoring/Testing Requirements
092 S01	Solutia shall **1)** In accordance with MassDEP Approval #1-P-99-020 (8/2/1999), monitor the vent scrubber water flow rate to ensure it is maintained at ≥ 35 gallons per minute during normal process operations.
092 S02	Solutia shall **2)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., check the integrity of the vapor recovery system (excluding the truck/rail car component) no less frequently than quarterly, by performing leak detection and repair on any system components with the potential to leak VOC, including gaskets, lines, and connections, to ensure that 90% VOC control is being attained from any loading operation of the butyraldehyde storage tanks. **3)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., monitor tank trucks/rail cars that are unloading organic materials to ensure they have current leak testing markings/signage indicating they have been leak tested in accordance with applicable leak testing requirements.
092 S03 092 S04	Solutia shall **4)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, ensure that the baghouse alarm system is operational for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
092 S05	Solutia shall **5)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown. **6)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, ensure that the high efficiency cyclone particle detectors and its alarm system is operational for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
Process-Wide	Solutia shall **7)** In accordance with MassDEP Approval #1-P-07-051 (11/30/2007), monitor polyvinyl butyral resin production on a daily basis.
all applicable components in VOC service	Solutia shall **8)** In accordance with MassDEP Approval #PV-85-IF-010 (1/16/1985; amended 9/17/1987), implement leak detection and repair procedures according to the "Standards of Performance for New Stationary Sources; Synthetic Organic Chemical Manufacturing Industry; Equipment Leaks of VOC" dated October 13, 1983. In cases where the specific equipment components with the potential to leak VOC from this process are not addressed in this document, the CTG document "Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment" dated March 1984 and past MassDEPal policy will serve to determine what procedures will be implemented, except that the more frequent leak checking intervals and quicker repair turnarounds specified in the former document will apply, except as follows: Solutia shall perform leak monitoring on a quarterly basis unless more than 1% of the equipment components leak. If the leak rate for any one quarter exceeds 1%, then monthly monitoring must be performed until three consecutive months achieve a 1% or less leak rate. Solutia can revert to quarterly monitoring once three consecutive months show a leak rate of 1% or less.
Site-Wide	**See Site-Wide Testing/Monitoring Requirements**

Table 5 – RB-9100	
EU #	**Record-keeping Requirements**
092 S01	Solutia shall **1)** In accordance with 310 CMR 7.00 Appendix C(10)(b), maintain records of the vent scrubber water flow rate, measured at least once per block hour.
092 S02	Solutia shall **2)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., maintain records of the quarterly checks of the vapor recovery system integrity. **3)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records (a checklist is acceptable) for each tank truck/rail car un loading operation indicating that the tank truck/rail car has current leak-test markings/signage indicating it has been leak tested in accordance with applicable leak testing requirements.
Process-Wide	Solutia shall **4)** In accordance with MassDEP Approval #1-P-07-051 (11/30/2007), maintain daily, monthly (calendar monthly, and yearly (12-month rolling total) records of polyvinyl butyral resin production.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – RB-9100	
EU #	**Reporting Requirements**
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

RB-9100 Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in RB-9100 Table 3, 4, 5, and 6:

Table 8 – RB-9100	
EU #	**Special Terms and Conditions**
092 S01 092 S03 092 S04 092 S05	Solutia shall **1)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.
Process-Wide	Solutia shall **2)** In accordance with MassDEP Approval #1-P-89-020 (June 28, 1989), submit to the MassDEP by January 15th of each year the results of a literature search regarding the feasibility of validating, either through field testing or through (future) EPA approved modeling, the sewered VOC emissions resulting from this process predicted by Solutia's model. **3)** In accordance with MassDEP Approval #PV-85-IF-010 (January 16, 1986), perform such field testing or modeling of the sewered VOC emissions from this process as soon as clear regulatory or scientific guidelines become available. **4)** In accordance with MassDEP Approval #1-P-89-020 (June 28, 1989), retrofit this process, and any future addition to this process, with a level of control equivalent to LAER, and provide for offsets, should either field testing or an approved EPA model show in excess of 40 tons per year of VOC emissions from the combined process emission points (process and sewered losses), as required under non-attainment regulations. **5)** In accordance with 40 CFR 63 Subpart FFFF, including the General Conditions referenced in Table 12 of that Subpart, comply with all applicable Subpart FFFF provisions in accordance with the applicable timelines, although no emission limits apply. The final compliance date for 40 CFR 63 Subpart FFFF is 05/10/2008.
Site-Wide	**See Site-Wide Reporting Requirements**

VII. GME – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1 – GME

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
GME	***Manufacturing of Gelva Multipolymer Emulsions***			
121 S01	Polymerization Reactor #3 System			
	PK-3 Reactor	121 P122		water cooled
	PK-3 Raw Material Weigh Tank	121 P122		condenser
	Reactor Feed Tank	121 P122		scrubber

VII. GME – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3 – GME

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
121 S01	vinyl acetate & acrylic monomers (2)	volatile organic compounds	scrubber efficiency ≥ 90% for vinyl acetate, methyl acrylate, acetaldehyde, methyl methacrylate, acrylic acid, & butyl acrylate water-cooled condensers – water supply temp. ≤ 95 °F water-cooled condensers – control efficiency ≥ 85%(1)	MassDEP Approval Trans. #50849 (November 2, 1992) MassDEP Approval 1-P-09-002 (5/26/2009) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/1989)

(1) For every batch cycle

(2) Monomers [typical]: vinyl acetate, acrylic acid, ethyl acrylate, methyl acrylate, 2-ethyl hexyl acrylate, butyl acrylate, methyl methacrylate

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4 – GME

EU #	Monitoring/Testing Requirements
121 S01	Solutia shall **1)** In accordance with MassDEP Approval Trans. #50849 (11/2/1992), set the water flow alarm for the scrubber to activate when water flow is less than ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 90% removal efficiency for vinyl acetate, methyl acrylate, acetaldehyde, methyl methacrylate, acrylic acid, & butyl acrylate. **2)** In accordance with the MassDEP RACT approval (6/20/1989), monitor and record the condenser tower water supply temperature continuously. **3)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, obtain valid data from the scrubber flow monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
all applicable components in VOC service	Solutia shall **4)** In accordance with MassDEP RACT Leak Detection and Repair Program Approval (4/14/1987), MassDEP RACT Approval (6/20/1989), and 310 CMR 7.00 Appendix C(9)(b)2., implement leak detection and repair procedures according to the "Standards of Performance for New Stationary Sources; Synthetic Organic Chemical Manufacturing Industry; Equipment Leaks of VOC" dated October 13, 1983 for all applicable components in VOC service. In cases where the specific equipment components with the potential to leak VOC from this process are not addressed in this document, the CTG document "Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment" dated March 1984 and past MassDEP policy will serve to determine what procedures will be implemented, except that the more frequent leak checking intervals and quicker repair turnarounds specified in the former document will apply.
Site-Wide	**See Site-Wide Testing/Monitoring Requirements**

Table 5 – GME

EU #	Record-keeping Requirements
121 S01	Solutia shall **1)** In accordance with MassDEP Approval Trans. #50849 (11/2/1992), maintain a record of all scrubber low/no flow alarms and make this log available to the MassDEP upon request. **2)** In accordance with the MassDEP RACT approval (6/20/1989), maintain records of the condenser tower water supply temperature.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – GME	
EU #	**Reporting Requirements**
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

GME Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in GME Table 3, 4, 5, and 6:

Table 8– GME	
EU #	**Special Terms and Conditions**
121 S01	Solutia shall **1)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.
Process-Wide	Solutia shall **2)** In accordance with 40 CFR 63 Subpart FFFF, including the General Conditions referenced in Table 12 of that Subpart, comply with all applicable Subpart FFFF provisions in accordance with the applicable timelines, although no emission limits apply. The final compliance date for 40 CFR 63 Subpart FFFF is 05/10/2008.

VIII. GMS – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1 – GMS

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
GMS	***Manufacturing of Gelva Multipolymer Solutions***			
117 S01	Polymerization Reactor #7 System			
	PK-7 Reactor	117 P027		packed bed scrubber
	PK-7 Monomer Delay	117 P027		
	PK-7 Cat Make-up	117 P027		
	PK-7 Cat Delay	117 P027		
117 S02	Polymerization Reactor #12 System			
	PK-12 Reactor	117 P026		packed bed scrubber
	PK-12 Monomer Delay	117 P026		
	PK-12 Cat Make-up	117 P026		
	PK-12 Cat Delay	117 P026		
117 S03	Gelva Polymerization Reactor #14 System			
	PK-14 Reactor	117 P334		packed bed scrubber
	PK-14 Cat Delay	117 P334		
	PK-14 Cat Make-up	117 P334		
	PK-14 Monomer Delay	117 P334		
	PK-14 Solvent Delay	117 P334		
117 S04a	GMS Product Storage, Filtration & Packout			
	Storage Tank 7E	TP2 T038		none
	Storage Tank 7W	TP2 T513		none
	Storage Tank 12E	TP2 T514		none
	Storage Tank 12W	TP2 P039		none
	Storage Tank 14E	TP2 P515		none
	Storage Tank 14W	TP2 T038		none
	Drum Packout Fugitives	117 P823		none
	Tank Truck Loading Fugitives	117 900		
	Filtration Fugitives	117 P824		
117 S04b	GMP process line			
	GMP Tank and Packout	117 P905		water cooled cond.
117 S05	Raw Material Storage Tanks			
	Storage Tank – ethyl acrylate	TP1 T357	10,000 gallons	cons. vent & vapor rec.
	Storage Tank – styrene	TP1 T136	10,000 gallons	cons. vent & vapor rec.
	Storage Tank – methyl acrylate	TP1 T044	11,000 gallons	cons. vent & vapor rec.
	Storage Tank – 2-ethyl hexyl acrylate	TP5 T047	50,000 gallons	cons. vent & vapor rec.
	Storage Tank – butyl acrylate	TP5 T144	50,000 gallons	cons. vent & vapor rec.
	Storage Tank – toluene	TP1 T043	13,000 gallons	cons. vent & vapor rec.
	Storage Tank – glacial acrylic acid	TP2 T400	5,500 gallons	cons. vent & vapor rec.
117 S06	Raw Material Storage Tanks			
	Storage Tank – hexane	TP1 T045	10,000 gallons	cons. vent & vapor rec.
	Storage Tank – methyl methacrylate	TP1 T048	10,000 gallons	cons. vent & vapor rec.

VIII. GMS – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3 – GMS

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
117 S01	see below(1)	volatile organic compounds	scrubber efficiency ≥ 90% (except for hydrophobic hydrocarbons such as toluene, styrene, and heptane) water-cooled condensers – water supply temp. ≤ 95 °F water-cooled condensers – control efficiency ≥ 85%(2)	MassDEP Approval Trans. #46071 (10/30/1992) MassDEP Approval #1-P-09-002 (5/26/2009) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/1989)
117 S02	see below(1)	volatile organic compounds	scrubber efficiency ≥ 90% (except for hydrophobic hydrocarbons such as toluene, styrene, and heptane) water-cooled condensers – water supply temp. ≤ 95 °F water-cooled condensers – control efficiency ≥ 85%(2)	MassDEP Approval Trans. #46173 (10/28/1992) MassDEP Approval #1-P-09-002 (5/26/2009) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/1989)
117 S03	see below(1)	volatile organic compounds	scrubber efficiency ≥ 90% (except for hydrophobic hydrocarbons such as toluene, styrene, and heptane) water-cooled condensers – water supply temp. ≤ 95 °F water-cooled condensers – control efficiency ≥ 85%(2)	MassDEP Approval Trans. #46174 (10/28/1992) MassDEP Approval #1-P-09-002 (5/26/2009) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/1989)
117 S04a	polymer solutions	volatile organic compounds	none (no controls are determined to be RACT)	MassDEP RACT Approval (6/20/1989)
117 S04b	polymer solutions	volatile organic compounds	≤ 1,000,000 pounds production of organic solvent based products (12 month rolling total) water-cooled condensers – water supply temp. ≤ 95 °F water-cooled condensers – control efficiency ≥ 85%(2)	MassDEP Approval #1-P-01-011 (4/11/2001) Regulation 310 CMR 7.18(17) MassDEP RACT Approval (6/20/1989)
117 S05	solvents & monomers	volatile organic compounds	vapor recovery control efficiency ≥ 90% for working losses	MassDEP Approval Trans. #52162 (11/6/1992)
117 S06	solvents & monomers	volatile organic compounds	vapor recovery control efficiency ≥ 90%	MassDEP Approval #1-P-93-022 (10/15/1993)

(1) Monomers [typical]: vinyl acetate, acrylic acid, dibutyl maleate, hydroxyl methyl methacrylate, ethyl acrylate, methyl acrylate, 2-ethyl hexyl acrylate, butyl acrylate, methyl methacrylate
Solvents [typical]: heptane, isopropyl alcohol, ethanol, xylene, kerosene, ethyl acetate, hexane, toluene, styrene

(2) For every batch cycle

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4a – GMS

EU #	Monitoring/Testing Requirements
117 SO1	Solutia shall **1)** In accordance with MassDEP Approval Trans. #46071 (10/30/1992), set the water flow alarm for the scrubber to activate when water flow is less than ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 90% removal efficiency for non-hydrophobic hydrocarbons). **2)** In accordance with 310 CMR 7.18(17) and the MassDEP RACT approval (6/20/1989), monitor and record the condenser tower water supply temperature continuously.
117 SO2	Solutia shall **3)** In accordance with MassDEP Approval Trans. #46173 (10/28/1992), set the water flow alarm for the scrubber to activate when water flow is less than ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 90% removal efficiency for non-hydrophobic hydrocarbons). **4)** In accordance with 310 CMR 7.18(17) and the MassDEP RACT approval (6/20/1989), monitor and record the condenser tower water supply temperature continuously. **5)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, obtain valid data from the condenser water supply temperature monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
117 SO3	Solutia shall **6)** In accordance with MassDEP Approval Trans. #46174 (10/28/1992), set the water flow alarm for the scrubber to activate when water flow is less than ½ of the optimized scrubber water flow rate (the flow rate that results in ≥ 90% removal efficiency for non-hydrophobic hydrocarbons). **7)** In accordance with 310 CMR 7.18(17) and the MassDEP RACT approval (6/20/1989), monitor and record the condenser tower water supply temperature continuously. **8)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2, obtain valid data from the condenser water supply temperature monitor for at least 75% of the hours per day for 75% of the days per calendar month that the emission unit operates, and for at least 90% of the hours per calendar quarter that the emission unit operates, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.
117 SO4b	Solutia shall **9)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), monitor pounds of organic solvent based products manufactured each month such that compliance with the 1,000,000 lb/year (12-month rolling total) limit for GMS products can be demonstrated. **10)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), verify through use of a flow switch or equivalent flow monitoring device that cooling water is being supplied to the formulation tank condenser prior to placing the tank in service. **11)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), whenever the formulation tank is in service, monitor continuously the cooling water temperature for the formulation tank condenser at the cooling tower water well through the Wonderware system or equivalent.

Table 4b – GMS	
EU #	**Monitoring/Testing Requirements**
117 SO5 117 SO6	Solutia shall **12)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., verify at least annually that signs are present at the loading rack(s) indicating that the vapor recovery system must be used by all trucks/rail cars unloading product. This monitoring may be performed concurrently with the leak detection and repair performed at these emission units. **13)** In accordance with 310 CMR 7.00 Appendix C(9)(b)2., monitor tank trucks/rail cars that are unloading organic materials to ensure they have current leak testing markings/signage indicating they have been leak tested in accordance with applicable leak testing requirements.
all applicable components in VOC service	Solutia shall **14)** In accordance with MassDEP RACT Leak Detection and Repair Program Approval (4/14/1987), MassDEP RACT Approval (6/20/1989), and 310 CMR 7.00 Appendix C(9)(b)2., implement leak detection and repair procedures according to the "Standards of Performance for New Stationary Sources; Synthetic Organic Chemical Manufacturing Industry; Equipment Leaks of VOC" dated October 13, 1983 for all applicable components in VOC service. In cases where the specific equipment components with the potential to leak VOC from this process are not addressed in this document, the CTG document "Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment" dated March 1984 and past MassDEPal policy will serve to determine what procedures will be implemented, except that the more frequent leak checking intervals and quicker repair turnarounds specified in the former document will apply.
Site-Wide	**See Site-Wide Testing/Monitoring Requirements**

Table 5 – GMS	
EU #	**Record-keeping Requirements**
117 SO1	Solutia shall **1)** In accordance with MassDEP Approval Trans. #46071 (10/30/1992), maintain a record of all scrubber low/no flow alarms and make this log available to the MassDEP upon request. **2)** In accordance with 310 CMR 7.18(17) and the MassDEP RACT approval (6/20/1989), maintain records of the condenser water supply temperature.
117 SO2	Solutia shall **3)** In accordance with MassDEP Approval Trans. #46173 (10/28/1992), maintain a record of all scrubber low/no flow alarms and make this log available to the MassDEP upon request. **4)** In accordance with 310 CMR 7.18(17) and the MassDEP RACT approval (6/20/1989), maintain records of the condenser water supply temperature.
117 SO3	Solutia shall **5)** In accordance with MassDEP Approval Trans. #46174 (10/28/1992), maintain a record of all scrubber low/no flow alarms and make this log available to the MassDEP upon request. **6)** In accordance with 310 CMR 7.18(17) and the MassDEP RACT approval (6/20/1989), maintain records of the condenser water supply temperature.
117 SO4b	Solutia shall **7)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), maintain permanent records documenting monthly production. **8)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), maintain permanent records documenting verification of cooling tower flow and cooling water temperature for the formulation tank.
117 SO5 117 SO6	Solutia shall **9)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records of the presence of signs at the loading rack(s) indicating that the vapor recovery system must be used by all trucks/rail cars unloading product. This recordkeeping may be part of the leak detection and repair recordkeeping performed at these emission units. **10)** In accordance with 310 CMR 7.00 Appendix C(9)(d), maintain records (a checklist is acceptable) for each tank truck/rail car unloading operation indicating that the tank truck/rail car has current leak-test markings/signage indicating it has been leak tested in accordance with applicable leak testing requirements.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

Table 6 – GMS	
EU #	**Reporting Requirements**
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

GMS Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in GMS Table 3, 4, 5, and 6:

Table 8 – GMS

EU #	Special Terms and Conditions
117 SO1 117 SO2 117 SO3	Solutia shall **1)** In accordance with MassDEP Approvals Trans. #46071 (10/30/1992), Trans. #46173 (10/28/1992), and Trans. #46174 (10/28/1992), ensure that all scheduled maintenance activities for the scrubber that necessitates reverting to the RACT permit conditions for that emission vent are only performed during the non-ozone months (October 1 through April 30). Any scheduled routine maintenance of this type that must occur during May 1 through September 30 must be approved beforehand by the MassDEP in writing. **2)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.
117 SO4b	Solutia shall **3)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), ensure that cooling tower water is being supplied to the formulation tank condenser whenever the formulation tank is in service through use of a flow switch or equivalent flow monitoring device. Any potential VOC emitting portion of the process shall be stopped if the cooling tower water supply is interrupted. The formulation tank will be considered in service whenever the tank contains material for production or when the tank is undergoing a heated wash cycle. **4)** In accordance with MassDEP Approval #1-P-01-011 (4/11/2001), maintain cooling tower water temperature for the formulation tank condenser at or below 95°F whenever the formulation tank is in service as measured at the cooling tower water well through the Wonderware system or equivalent. If the cooling tower water temperature increases above 95°F, any potential VOC emitting portion of the process shall be stopped
117 SO5	Solutia shall **5)** In accordance with MassDEP Approval Trans. #52162 (11/6/1992), post conspicuous signs at the unloading rack specifying that the vapor recovery system must be used by all trucks unloading product. **6)** In accordance with MassDEP Approval Trans. #52162 (11/6/1992), not permit any truck to unload product at the loading rack unless the truck is equipped with a properly operating and leak tight vapor recovery system as determined by markings/signage indicating that it has been leak tested in accordance with applicable leak testing requirements.
117 SO6	Solutia shall **7)** In accordance with MassDEP Approval 1-P-93-022 (10/15/1993), post conspicuous signs at the unloading rack specifying that a properly operating and leak tight vapor recovery system must be used by all trucks/rail cars unloading product. **8)** In accordance with MassDEP Approval #1-P-93-022 (10/15/1993), not permit any truck to unload product at the loading rack unless the truck is equipped with a properly operating and leak tight vapor recovery system as determined by markings/signage indicating that it has been leak tested in accordance with applicable leak testing requirements.
Process-Wide	Solutia shall **9)** In accordance with 40 CFR 63 Subpart FFFF, including the General Conditions referenced in Table 12 of that Subpart, comply with all applicable Subpart FFFF provisions in accordance with the applicable timelines, although no emission limits apply. The final compliance date for 40 CFR 63 Subpart FFFF is 05/10/2008.
Site-Wide	**See Site-Wide Record-Keeping Requirements**

IX. Miscellaneous – Emission Unit Identification

The following emission units are subject to and regulated by this operating permit:

Table 1 – Miscellaneous

Emission Unit (EU)	Description of Emission Unit	Stack #	EU Design Capacity	Pollution Control Device
Miscellaneous				
131 F001	East Diversion Tank North Equalization Tank South Equalization Tank	Open tanks w/o stacks	300,000 gallons 1,000,000 gallons 1,000,000 gallons	none
IO F01	Cold Cleaning Degreaser-Resimene Cold Cleaning Degreaser-RB 9100 Cold Cleaning Degreaser-South Butvar Cold Cleaning Degreaser-GME/GMS Cold Cleaning Degreaser-Central Maintenance Cold Cleaning Degreaser-Powerhouse Cold Cleaning Degreaser-Saflex Cold Cleaning Degreaser-Saflex Cold Cleaning Degreaser-Saflex Cold Cleaning Degreaser-Maintenance	Bldg. 94 Bldg. 92 Bldg. 132 Bldg. 103 Bldg. 100 Bldg. 154 Bldg. 99 Bldg. 99 Bldg. 99 Bldg. 61	< 100 gallons < 100 gallons < 100 gallons < 100 gallons < 100 gallons < 100 gallons < 100 gallons < 100 gallons < 100 gallons < 100 gallons	closed cover & minimum freeboard ratio
136 S001	4-½" NRM extruder 4-½" Berlin extruder 2-½" Extruder 1-½" Extruder Twin screw extruder Hot oil system Plasticizer system UnaDyn pellet dryer Misc. point sources	036 P052		Mist Eliminator (Monsanto Enviro-Chem)
	Resin separator/receiver Diosna premix/cooler	036 P037		Fabric Filter (Hardy)
	Black-Clawson encapsulating machine (ALS)	exhaust fan		
	Blender/granulator Plasticizer surge tank Scrap separator Air knife Gradient handling equipment	none		

IX. Miscellaneous – Applicable Requirements

A. EMISSION LIMITS AND RESTRICTIONS – The Permittee is subject to the emission limits/restrictions as contained in Table 3 below:

Table 3 – Miscellaneous

EU #	Fuel or Raw Material	Pollutant	Emission Limits / Restrictions	Applicable Regulation and/or Approval No.
IO F01	degreasing solvent	volatile organic compounds	solvent consumption[1] rate < 100 gallons/month for each cold cleaning degreaser	Regulation 310 CMR 7.03(8) Regulation 310 CMR 7.18(8)
136 S001	resins	particulate matter & condensable hydrocarbons	≥ 99.5% PM control (Resin separator / receiver)	Regulation 310 CMR 7.03(12) MassDEP Approval #1-P-09-002 (5/26/2009)

(1) Consumption rate is the amount of solvent added into the unit less any documented solvent waste disposal or recycling amounts, each in gallons per month.

B. COMPLIANCE DEMONSTRATION – The Permittee is subject to the monitoring, testing, record-keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10): and applicable requirements as contained in Table 3.

Table 4 – Miscellaneous	
EU #	**Monitoring/Testing Requirements**
IO F01	Solutia shall **1)** In accordance with 310 CMR 7.18(8)(g), upon request of the MassDEP or EPA, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(8).
Site-Wide	**See Site-Wide Testing/Monitoring Requirements**

Table 5 – Miscellaneous	
EU #	**Record-keeping Requirements**
IO F01	Solutia shall **1)** In accordance with 310 CMR 7.18(8)(f) and 310 CMR 7.00 Appendix C(10)(b), prepare and maintain records of each solvent replacement sufficient to demonstrate compliance consistent with an instantaneous averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the MassDEP and EPA upon request. Such records shall include, but are not limited to: a. identity, quantity, formulation and density of solvent(s) used, and b. quantity, formulation and density of all waste solvent(s) generated, and c. actual operational and performance characteristics of the degreaser. **2)** In accordance with 310 CMR 7.03(8) and 7.18(8), prepare and maintain records of solvent replacement sufficient to demonstrate compliance with the solvent use rates stated in 310 CMR 7.03(8).
Site-Wide	**See Site-Wide Recordkeeping Requirements**

Table 6 – Miscellaneous	
EU #	**Reporting Requirements**
IO F01	Solutia shall **1)** In accordance with 310 CMR 7.18(8)(f), make available to the MassDEP and EPA upon request, records kept to demonstrate compliance. **2)** In accordance with 310 CMR 7.03(5), report to the MassDEP any construction, substantial reconstruction or alteration of a degreaser described in 310 CMR 7.03(8) on the next required Source Registration/Emission Statement, in accordance with 310 CMR 7.12.
Site-Wide	**See Site-Wide Reporting Requirements**

The annual Source Registration/Emission Statement report shall be submitted to the MassDEP office specified in the instructions. ***All other reports, including both 6-month summary reports, are to be submitted to the Western Regional Office address, as specified on the letterhead of this Operating Permit.***

Miscellaneous Special Terms and Conditions

The Permittee is subject to the following special provisions that are not contained in Non-Process Specific Table 3, 4, 5, and 6:

Table 8– Miscellaneous

EU #	Special Terms and Conditions
IO F01	**1)** In accordance with 310 CMR 7.18(8)(a), not cause, suffer, allow or permit emissions of VOC from a cold cleaning degreaser unless the solvent used in a cold cleaning degreaser has have a vapor pressure that does not exceed 1.0 mm Hg measured at 20 ºC. This requirement shall not apply to the following: a. cold cleaning degreasers used in special and extreme solvent metal cleaning; b. cold cleaning degreasers for which the owner or operator has received MassDEP approval of a demonstration that compliance with the requirement to use a solvent with a vapor pressure of 1.0 mm Hg or less at 20/C will result in unsafe operating conditions; and c. cold cleaning degreasers that are located in a permanent total enclosure having control equipment that is designed and operated with an overall VOC control efficiency of 90% or greater. **2)** In accordance with 310 CMR 7.18(8)(a), not cause, suffer, allow or permit emissions of VOC from a cold cleaning degreaser unless any leaks are repaired immediately, or the degreaser shut down. **3)** The following requirements shall apply unless the cold cleaning degreaser is a sinklike work area with a remote solvent reservoir with an open drain area less than 100 square centimeters: a. Each cold cleaning degreaser is equipped with a cover that is designed to be easily operated with one hand; b. Each cold cleaning degreaser is equipped to drain clean parts so that, while draining, the cleaned parts are enclosed for 15 seconds or until dripping ceases, whichever is longer; c. Each cold cleaning degreaser is designed with: i. a freeboard ratio of 0.75 or greater; or ii. a water blanket (only if the solvent used is insoluble in and heavier than water); or iii. an equivalent system of air pollution control which has been approved by the MassDEP and EPA; d. The covers of each cold cleaning degreaser are closed whenever parts are not being handled in the degreaser, or when the degreaser is not in use; and e. The drafts across the top of each cold cleaning degreaser are minimized such that when the cover is open the degreaser is not exposed to drafts greater than 40 meters per minute (1.5 miles per hour), as measured between one and two meters upwind at the same elevation as the tank lip.
136S001	Solutia shall **4)** In accordance with MassDEP Approval #1-P-09-002 (05/26/2009) for a Startup, Shutdown, and Malfunction Plan for particulate control equipment and scrubbers, follow the procedures described therein, including but not limited to monitoring, recordkeeping, notifications/reporting, control device alarms, emission observations, control device repair, process operations, and emission unit shutdown.

C. GENERAL APPLICABLE REQUIREMENTS – The Permittee shall comply with all general applicable requirements contained in 310 CMR 7.00 et. seq. and 310 CMR 8.00 et. seq., when subject.

D. REQUIREMENTS NOT CURRENTLY APPLICABLE – The Permittee is currently not subject to the following requirements:

Table 7

Regulation	Reason
40 CFR 63 Subpart T: National Emissions Standards for Halogenated Solvent Cleaning	Not applicable
40 CFR 60 Subpart Da, Db, Dc	Not applicable
40 CFR 60 Subpart VV, for LDAR	Not applicable
40 CFR 60 Subpart NNN, for Distillation	Not applicable
40 CFR 60 Subpart III for Reactors	Not applicable
40 CFR 60 Subpart RRR for Reactors	Not applicable
40 CFR 60 Subpart DDD for Polymer Manufacturing	Not applicable
40 CFR Part 82 – Stratospheric Ozone	Not applicable

6. ALTERNATIVE OPERATING SCENARIOS

The permittee did not request alternative operating scenarios in its operating permit application.

7. EMISSIONS TRADING

A. Intra-facility emission trading

The facility did not request intra-facility emissions trading in its operating permit application.

Pursuant to 310 CMR 7.00: Appendix C(7)(b), emission trades, provided for in this permit, may be implemented provided the Permittee notifies the United States Environmental Protection Agency (EPA) and the MassDEP at least fifteen (15) days in advance of the proposed changes and the Permittee provides the information required in 310 CMR 7.00: Appendix C(7)(b)3.

Any intra-facility change that does not qualify pursuant to 310 CMR 7.00: Appendix C(7)(b)2. is required to be submitted to the MassDEP pursuant to 310 CMR 7.00: Appendix B.

B. Inter-facility emission trading

The Permittee did not request inter-facility emissions trading in its operating permit application.

All increases in emissions due to emission trading must be authorized under the applicable requirements of 310 CMR 7.00: Appendix B (the "Emissions Trading Program") and the 42 U.S.C. §7401 et. seq. (the "Act"), and provided for in this permit.

8. COMPLIANCE SCHEDULE

The Permittee has indicated that the facility is in compliance and shall remain in compliance with the applicable requirements contained in Sections 4 and 5.

In addition, the Permittee shall comply with any applicable requirements that become effective during the permit term.

GENERAL CONDITIONS FOR OPERATING PERMIT

9. FEES

The permittee has paid the permit application processing fee and shall pay the annual compliance fee in accordance with the fee schedule pursuant to 310 CMR 4.00.

10. COMPLIANCE CERTIFICATION

All documents submitted to the MassDEP shall contain certification by the responsible official of truth, accuracy, and completeness. Such certification shall be in compliance with 310 CMR 7.01(2) and contain the following language:

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

The “Operating Permit Reporting Kit” contains instructions and the Annual Compliance Report and Certification and the Semi-Annual Monitoring Summary Report and Certification. The “Operating Permit Reporting Kit” is available to the Permittee via the MassDEP’s web site, http://www.mass.gov/dep/air/approvals/aqforms.htm#op .

(a) Annual Compliance Report and Certification

The Responsible Official shall certify, annually for the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30 to the MassDEP and to the Regional Administrator, U.S. Environmental Protection Agency - New England Region. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

i. the terms and conditions of the permit that are the basis of the certification;
ii. the current compliance status and whether compliance was continuous or intermittent during the reporting period;
iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
iv. any additional information required by the MassDEP to determine the compliance status of the source.

(b) Semi-Annual Monitoring Summary Report and Certification

The Responsible Official shall certify, semi-annually on the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30 and July 30 to the MassDEP. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

i. the terms and conditions of the permit that are the basis of the certification;
ii. the current compliance status during the reporting period;
iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
iv. whether there were any deviations during the reporting period;
v. if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
vi. whether deviations in the reporting period were previously reported;
vii. if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
viii. if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
ix. any additional information required by the MassDEP to determine the compliance status of the source.

11. NONCOMPLIANCE

Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: Appendix C and the Clean Air Act, and is grounds for enforcement action, for permit termination or revocation, or for denial of an operating permit renewal application by the MassDEP and/or EPA. Noncompliance may also be grounds for assessment of administrative or civil penalties under M.G.L. c.21A, §16 and 310 CMR 5.00; and civil penalties under M.G.L. c.111, §142A and 142B. This permit does not relieve the permittee from the obligation to comply with any other provisions of 310 CMR 7.00 or the Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this permit.

12. PERMIT SHIELD

(a) This facility has a permit shield provided that it operates in compliance with the terms and conditions of this permit. Compliance with the terms and conditions of this permit shall be deemed compliance with all applicable requirements specifically identified in Sections 4, 5, 6, and 7, for the emission units as described in the permittee's application and as identified in this permit.

Where there is a conflict between the terms and conditions of this permit and any earlier approval or permit, the terms and conditions of this permit control.

(b) The MassDEP has determined that the permittee is not currently subject to the requirements listed in Section 4, Table 7.

(c) Nothing in this permit shall alter or affect the following:
i. the liability of the source for any violation of applicable requirements prior to or at the time of permit issuance.

ii. the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
iii. the ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

13. ENFORCEMENT

The following regulations found at 310 CMR 7.02(8)(h) Table 6 for wood fuel, 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.21, 7.22, 7.70 and any condition(s) designated as "state only" are not federally enforceable because they are not required under the Act or under any of its applicable requirements. These regulations and conditions are not enforceable by the EPA. Citizens may seek equitable or declaratory relief to enforce these regulations and conditions pursuant to Massachusetts General Law Chapter 214, Section 7A

All other terms and conditions contained in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the MassDEP, EPA and citizens as defined under the Act.

A Permittee shall not claim as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

14. PERMIT TERM

This permit shall expire on the date specified on the cover page of this permit, which shall not be later than the date 5 years after issuance of this permit.

Permit expiration terminates the permittee's right to operate the facility's emission units, control equipment or associated equipment covered by this permit, unless a timely and complete renewal application is submitted at least 6 months before the expiration date.

15. PERMIT RENEWAL

Upon the MassDEP’s receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by the MassDEP on the renewal application.

In the event the MassDEP has not taken final action on the operating permit renewal application prior to this permit's expiration date, this permit shall remain in effect until the MassDEP takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: Appendix C(13).

16. REOPENING FOR CAUSE

This permit may be modified, revoked, reopened, and reissued, or terminated for cause by the MassDEP and/or EPA. The responsible official of the facility may request that the MassDEP terminate the facility's operating permit for cause. The MassDEP will reopen

and amend this permit in accordance with the conditions and procedures under 310 CMR 7.00: Appendix C(14).

The filing of a request by the permittee for an operating permit revision, revocation and reissuance, or termination, or a notification of a planned change or anticipated noncompliance does not stay any operating permit condition.

17. DUTY TO PROVIDE INFORMATION

Upon the MassDEP's written request, the permittee shall furnish, within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall furnish to the MassDEP copies of records that the permittee is required to retain by this permit.

18. DUTY TO SUPPLEMENT

The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a complete renewal application was submitted but prior to release of a draft permit.

The permittee shall promptly, on discovery, report to the MassDEP a material error or omission in any records, reports, plans, or other documents previously provided to the MassDEP.

19. TRANSFER OF OWNERSHIP OR OPERATION

This permit is not transferable by the permittee unless done in accordance with 310 CMR 7.00: Appendix C(8)(a). A change in ownership or operation control is considered an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between current and new permittee, has been submitted to the MassDEP.

20. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

21. INSPECTION AND ENTRY

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the MassDEP, and EPA to perform the following:

(a) enter upon the permittee's premises where an operating permit source activity is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;

(b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times any substances or parameters for the purpose of assuring compliance with the operating permit or applicable requirements as per 310 CMR 7.00 Appendix C(3)(g)(12).

22. PERMIT AVAILABILITY

The permittee shall have available at the facility, at all times, a copy of the materials listed under 310 CMR 7.00: Appendix C(10)(e) and shall provide a copy of the permit, including any amendments or attachments thereto, upon request by the MassDEP or EPA.

23. SEVERABILITY CLAUSE

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

24. EMERGENCY CONDITIONS

The permittee shall be shielded from enforcement action brought for noncompliance with technology based[1] emission limitations specified in this permit as a result of an emergency[2]. In order to use emergency as an affirmative defense to an action brought for noncompliance, the permittee shall demonstrate the affirmative defense through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) an emergency occurred and that the permittee can identify the cause(s) of the emergency;

(b) the permitted facility was at the time being properly operated;

(c) during the period of the emergency, the permittee took all reasonable steps as expeditiously as possible, to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and

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[1] Technology based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain health based air quality standards.

[2] An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology based limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any of these things.

(d) the permittee submitted notice of the emergency to the MassDEP within two (2) business days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

If an emergency episode requires immediate notification to the Bureau of Waste Site Cleanup/Emergency Response, immediate notification to the appropriate parties should be made as required by law.

25. PERMIT DEVIATION

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to section 24 of this permit. Reporting a permit deviation is not an affirmative defense for action brought for noncompliance. Any reporting requirements listed in Table 6 of this Operating Permit shall supercede the following deviation reporting requirements, if applicable.

The Permittee shall report to the MassDEP's Regional Bureau of Waste Prevention the following deviations from permit requirements, by telephone or fax, within three (3) days of discovery of such deviation:

- Unpermitted pollutant releases, excess emissions or opacity exceedances measured directly by CEMS/COMS, by EPA reference methods or by other credible evidence, which are ten percent (10%) or more above the emission limit.
- Exceedances of parameter limits established by your Operating Permit or other approvals, where the parameter limit is identified by the permit or approval as surrogate for an emission limit.
- Exceedances of permit operational limitations directly correlated to excess emissions.
- Failure to capture valid emissions or opacity monitoring data or to maintain monitoring equipment as required by statutes, regulations, your Operating Permit, or other approvals.
- Failure to perform QA/QC measures as required by your Operating Permit or other approvals for instruments that directly monitor compliance.

For all other deviations, three (3) day notification is waived and is satisfied by the documentation required in the subsequent Semi-Annual Monitoring Summary and Certification. Instructions and forms for reporting deviations are found in the Massachusetts MassDEP of Environmental Protection Bureau of Waste Prevention Air Operating Permit Reporting Kit, which is available to the Permittee via the MassDEP's web site, http://www.mass.gov/dep/air/approvals/aqforms.htm#op .

This report shall include the deviation, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and the corrective actions or preventative measures taken.

Deviations that were reported by telephone or fax within 3 days of discovery, said deviations shall also be submitted in writing via the Operating Permit Deviation Report to the regional Bureau of Waste Prevention within ten (10) days of discovery. For deviations, which do not require 3-day verbal notification, follow-up reporting requirements are satisfied by the documentation required in the aforementioned Semi-Annual Monitoring Summary and Certification.

26. OPERATIONAL FLEXIBILITY

The permittee is allowed to make changes at the facility consistent with 42 U.S.C. §7401, §502(b)(10) not specifically prohibited by the permit and in compliance with all applicable requirements provided the permittee gives the EPA and the MassDEP written notice fifteen days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(h) and (i). The notice shall comply with the requirements stated at 310 CMR 7.00: Appendix C(7)(a) and will be appended to the facility's permit. The permit shield allowed for at 310 CMR 7.00: Appendix C(12) shall not apply to these changes.

27. MODIFICATIONS

(a) Administrative Amendments – The permittee may make changes at the facility which are considered administrative amendments pursuant to 310 CMR 7.00: Appendix C(8)(a)1., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(b).

(b) Minor Modifications – The permittee may make changes at the facility which are considered minor modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)2.,provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(d).

(c) Significant Modifications – The permittee may make changes at the facility which are considered significant modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)3., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(c).

(d) No permit revision shall be required, under any approved economic incentives program, marketable permits program, emission trading program and other similar programs or processes, for changes that are provided in this operating permit. A revision to the permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program under Title IV of the Act, provided that such increases do not require an operating permit revision under any other applicable requirement.

28. LEGEND OF ABBREVIATED TERMS IN OPERATING PERMIT

Not all abbreviations are present in every Operating Permit

10^6 Btu/hr	1,000,000 Btu per hour
CEM	continuous emission monitor
CGA	cylinder gas audit
the Chart	the Ringelmann Scale for grading the density of smoke
CO	carbon monoxide
CO_2	carbon dioxide
COM	continuous opacity monitor
DAS	data acquisition system
EPA or USEPA	Environmental Protection Agency
FMF FAC. NO.	Facility Master File Number
FMF RO. NO.	Facility Master File Regulated Object Number
ft^3	cubic feet
g	gram
gr	grain
gpm	gallons per minute
HHV	higher heating value
hr	hour
ISO	represents 59℉, 60% relative humidity, 29.92 i nches mercury at sea level
lb	pound
lb/MMBtu	pounds per million British thermal units
MMBtu/hr	million British thermal units per hour
MW	megawatt (1,000,000 watts)
ng	natural gas
NH_3	ammonia
NO_x	nitrogen oxides
PLT ID	Plant Identification
PM	particulate matter
ppm	parts per million
ppmvd	parts per million (by volume, dry)
PTE	potential to emit
RATA	relative accuracy test audit
SO_2	sulfur dioxide
tpy	tons per year
VOC	volatile organic compound

APPEAL CONDITIONS FOR OPERATING PERMIT

This permit is an action of the MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing within 21 days of issuance of this permit. In addition, any person who participates in any public participation process required by the Federal Clean Air Act, 42 U.S.C. §7401, §502(b)(6) or under 310 CMR 7.00: Appendix C(6), with respect to the MassDEP's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to Chapter 30A, and may obtain judicial review, pursuant to Chapter 30A, of a final decision therein.

If an adjudicatory hearing is requested, the facility must continue to comply with all existing federal and state applicable requirements to which the facility is currently subject, until a final decision is issued in the case or the appeal is withdrawn. During this period, the application shield shall remain in effect, and the facility shall not be in violation of the Act for operating without a permit.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the permit is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to The Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to:

The Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency) county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.